

INDIAN TARIFF BOARD

Oral Evidence

recorded during enquiry on the

SUGAR INDUSTRY

Volume II



CALCUTTA : GOVERNMENT OF INDIA
CENTRAL PUBLICATION BRANCH
1932

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IMPERIAL COUNCIL OF AGRICULTURAL RESEARCH.

(1) Oral Evidence of Mr. B. C. BURT, recorded at Calcutta on Thursday, the 25th September, 1930.

President.—Mr. Burt, you appear on behalf of the Imperial Council of Agricultural Research?

Mr. Burt.—Yes.

President.—What is your position exactly?

Mr. Burt.—Agricultural Expert.

President.—I would like to start by complimenting you on the replies you have sent to our questionnaire. They are extremely useful and very lucid and throw a lot of light on the subject we are investigating.

Dr. Matthai.—The replies may be taken to be the views of the Imperial Council of Agricultural Research?

Mr. Burt.—Yes. The actual written replies have been approved by the Vice-Chairman as the official representation on behalf of the Council and any actual proposals are those of the Sugar Committee appointed by the Council to deal with the question of sugar.

President.—As you know, our terms of reference contemplate that we should investigate whether the Sugar Industry satisfies the three conditions laid down by the Fiscal Commission and the first of these conditions is the question of the natural advantages for the growing of cane, the manufacture of sugar and of *gur* in India. You say that there are four natural advantages for growing of cane in India. The first is labour?

Mr. Burt.—The first is a large supply of raw material and great scope for expansion. the second is an adequate supply of labour.

President.—Not only an adequate but a cheap labour supply as compared with other countries?

Mr. Burt.—Yes

President.—Am I right in thinking that in other sugar growing countries, except possibly in Java, rates of labour are not so cheap as they are in India?

Mr. Burt.—Yes. If you exclude Java which has a very specially organized sugar industry, organized on somewhat different lines to that in most countries, India certainly has an advantage over all the principal sugar growing countries in the world as regards cheap labour.

President.—The next natural advantage you claim is a very large home market.

Mr. Burt.—Yes, almost the largest market for sugar in the world.

President.—And to some extent a natural protection for the industry by railway freight upcountry?

Mr. Burt.—Yes. The principal cane growing areas are some distance from the ports and some of the large consuming centres are also at some distance from the ports.

President.—And the market is likely to expand I understand?

Mr. Burt.—The consumption of all sugar products is steadily expanding.

President.—Then the third is?

Mr. Burt.—The third was the large home market. Then so far as the small village industry is concerned, there is the fact that hydro-electric power is becoming available in the United Provinces and the Punjab;

though this does not affect modern factories very much, because they do not require any appreciable amount of additional fuel in addition to the bagasse, it does affect the small scale industry.

President.—Then there is the possibility of considerable development in output?

Mr. Burt.—Yes. In regard to the supply of raw material the introduction of improved types of cane has put the yield up by something like 50 per cent. The area now under improved types of cane is roughly speaking a quarter of the total area under cane in India and a considerably larger fraction of the total area under cane in the principal cane belts. We have enormous room for expansion there. We know that with our present improved types of cane with the simplest improvements in cultivation the yield in certain areas can be raised to 600 maunds an acre; 800 maunds is actually being obtained by the larger cultivators by further improvements in cultivation, and 1,000 maunds is being obtained by a few as well as by Government farms.

Dr. Matthai.—Is it a reasonable assumption that during the next few years, say, within 10 years, an average of somewhere about 30 tons per acre in the main sugar belt would be attained?

Mr. Burt.—That is well within the bounds of probability.

President.—At present in the main sugar belt they are producing very much more with the improved cane than 15 tons an acre. You think it is quite possible to put that up to 40 tons?

Mr. Burt.—Quite possible.

President.—That is an increase of 160 per cent.

Mr. Burt.—That is being reached already.

President.—You have given figures supplied by the Director of Agriculture, Bengal.

Mr. Burt.—Yes and also from the Director of Agriculture, United Provinces. The Director of Agriculture, Bengal says in a recent report that "the introduction of improved canes has raised the normal *gur* yield from 26 maunds (of 80½ lbs.) per acre to about 50 maunds per acre, that the introduction of improved varieties has led to an increase in the cane area and that instead of importing 200,000 maunds of *gur* annually Bengal now has an exportable surplus".

President.—Then you mention another direction in which cultivation is affected—that is irrigation. That is also a natural advantage?

Mr. Burt.—Practically the whole of the cane area in the United Provinces, except the Gorakhpore Division is now commanded by canals. In Rohilkhand and Lucknow Divisions there is the Sarda Canal; the Ganges canal system runs right through the Agra Province including the very important division of Meerut which is a great *gur*-producing area, while most of the Punjab is canal-protected. Cane cultivation is expanding in the canal areas in the Punjab and with new varieties of sugarcane they seem to have got over the difficulty about frost damage which was a limiting factor until recently.

Dr. Matthai.—How did frost affect the crop?

Mr. Burt.—It damaged all but the most rapid maturing varieties.

President.—Then there are the advantages—though they do not come under the Fiscal Commission's conditions—which result from growing sugarcane, in that it may be regarded as a necessary part of the ordinary system of agriculture in India?

Mr. Burt.—It is a feature of the agricultural system of the country and a very essential feature. It is fundamental to the intensification of agriculture.

Dr. Matthai.—Precisely what do you mean by intensification? Is it getting more out of the land?

Mr. Burt.—It is getting for the cultivator a bigger return for his labour. That is one great advantage of the cane crop. To a peasant cultivator it gives a better return for his labour and employs him throughout a large portion of the year.

Dr. Matthai.—That is to say, by having sugarcane as the main crop you are able to get a gross return which covers adequately the wages of the labourer. Is that what you mean?

Mr. Burt.—It is not so much a question of hired labour. In the case of a peasant cultivator and tenant farmer most of the work is carried out by the farmer himself and his family.

President.—And it affords him occupation at times when he is otherwise idle?

Mr. Burt.—Yes.

Dr. Matthai.—Is the implication this, that if it were some other crop there would be less likelihood of the peasant farmer and his family covering the market cost of his labour?

Mr. Burt.—Yes; you can put it in those terms.

Dr. Matthai.—Supposing in the Punjab instead of sugarcane more wheat is grown?

Mr. Burt.—Already there are signs of over production of wheat. The trouble at the present moment is that there is a tendency throughout the world for agricultural production to be in excess of the effective demand for agricultural produce which gives one nearly all the features of over-production, the result is that the prices of nearly all staple commodities have fallen very severely. So that apart from the fact that sugar from the technical point of view occupies a special position in agriculture, at the present time it occupies a special position from the economic point of view also.

Dr. Matthai.—May I take it then that your position is that sugar as compared with practically every other alternative crop in the main sugar belt may be counted upon to give the labourer a better gross return?

Mr. Burt.—Certainly.

President.—It would also prevent the Indian cultivator to some extent being so entirely dependent on the export market. For example you mention Bengal. There the cultivator has an alternative crop in jute and in Madras, rice; but the price of these crops depend on the export market.

Mr. Burt.—I think that in Bengal there is a possibility of rice replacing jute in parts of the best jute growing area and of sugarcane replacing rice in those parts which are not so well suited to jute and rice cultivation. In Madras I certainly think there is scope for more sugarcane cultivation because they have the climate, they have irrigation, they have suitable land and they have the labour.

President.—Would you be disposed to agree with the Director of Agriculture, Madras, that it is desirable to diversify the crops in Madras more than is done at present, that they should not rely so much on rice?

Mr. Burt.—Yes.

President.—Apart from employing labour, there is a definite effect on the rotation of crops?

Mr. Burt.—Yes. The yield in the case of crops grown after sugarcane is, generally speaking, considerably higher than with other rotation crops. For example, when you combine the growing of improved wheats in the United Provinces with the cultivation of sugarcane you can push up the yield of wheat to 30 maunds per acre as compared with 20 maunds an acre from the same improved wheat grown under the ordinary village system of agriculture.

President.—Apart from the Fiscal Commission's conditions you attach considerable importance to this aspect of the case, do you not?

Mr. Burt.—I would go so far as to say that sugarcane cultivation is quite as essential to India as the beet crop is to farmers throughout Europe.

Dr. Matthai.—Supposing we found that the conditions of the Fiscal Commission were not satisfied by the Sugar industry, you would contend that in spite of that there was a very good case for granting protection to sugar from the point of view of the national interest?

Mr. Burt.—Yes certainly.

Dr. Matthai.—Even if the conditions were not fulfilled?

Mr. Burt.—I consider that they are all fulfilled but I agree that, even if they were not fulfilled, sugarcane growing is essential from the point of view of national economy and there is a strong case for protecting the sugar industry.

Dr. Matthai.—I am raising that point. There are cases where, though the conditions of the Fiscal Commission are not fulfilled, protection is necessary from the national point of view. This is a case which according to you can establish its claim for protection both on the basis of the Fiscal Commission's conditions and also on the basis of national interest?

Mr. Burt.—Yes.

Dr. Matthai.—Could you give us an approximate estimate of the number of people who are dependent in one way or another on the cultivation of sugarcane in India?

Mr. Burt.—Making a rough estimate I should say something like 13 million people

Dr. Matthai.—How do you arrive at that figure?

Mr. Burt.—There are three million acres of cane in India and even in the best cane districts cane does not occupy more than 15 per cent. of the cultivated area, so that gives 20 million acres of holdings on which cane is grown. If you take the average holding to be as large as 6 acres, which is rather a high figure, that means $3\frac{1}{3}$ millions of holdings and if you allow four people as concerned in the working of a holding, that will give you 13 million people in other words 4 to 5 people per acre of cane.

Dr. Matthai.—I suppose there are no cases where people are entirely dependent on cane?

Mr. Burt.—There are, but they are not typical and it would be difficult to form any estimate of the number.

Dr. Matthai.—In connection with that also there is a point to be remembered. Sugarcane is the main cash crop in this area we have in mind, I mean in the main sugar belt, in the sense that though other crops may supplement the earnings of the raiyat they can never replace cane. That is to say, a man may grow cotton in addition to sugarcane and increase his cash earning, but it would always be a means of supplementing his cash earning but not of replacing sugarcane. Is that correct?

Mr. Burt.—That is true but in regard to cotton I ought to say that cotton and sugarcane are largely independent; there is comparatively little cotton in the sugarcane belt and very little sugarcane in the cotton belt.

Dr. Matthai.—What about wheat in the Punjab?

Mr. Burt.—Wheat is to a large extent a cash crop but it is difficult to look on wheat as entirely a cash crop.

Dr. Matthai.—Supposing you isolated the Punjab from the main sugar belt, then in the Punjab would it be true to say that wheat is the more important cash crop than sugarcane?

Mr. Burt.—At present it would for some parts of the Punjab, because you have a wheat-cotton tract in the Punjab; you have also a wheat-sugar tract in the Punjab. Generally speaking the Western Punjab, the drier part of the province, at present grows less sugarcane and the cultivators are mainly dependent on wheat, cotton and oilseeds.

Dr. Matthai.—As far as the rest of the main sugar belt is concerned, the position is that sugarcane is the main cash crop?

Mr. Burt.—Yes. Cotton is relatively of much less importance there. In the typical cotton tracts like Khandesh, Berar and Gujrat there is very little sugarcane grown.

President.—Turning to the third condition of the Fiscal Commission whether the industry would be able to stand without protection, I think in considering this condition we are entitled to assume that the Fiscal Commission in laying it down contemplated that the industry with which the Tariff Board might be concerned would face competition under free trade conditions.

Mr. Burt.—I think that must be assumed.

President.—I understand a good deal of the trouble in the sugar industry is the result of direct and indirect protection by means of duties and bounties in England and on the Continent for beet sugar and preferential duties for cane sugar in America. If there was no artificial assistance to the sugar industry, at what level would you place the price of sugar approximately? The level of prices is determined by the cost of production in the least favourably situated countries where it would be necessary to grow cane if the full demand was to be met.

Mr. Burt.—This is not an exact answer to your question. But take the case of the West Indies. Their cost of production is about 15 shillings a cwt. Two-thirds of the sugar in the world is produced at a higher cost than that, running up to double. The cost of producing beet sugar is nearly double the cost of producing cane sugar in Java and yet the beet industry which is nearly a third of the world's total production is kept going by very high protective tariffs, bounties and various other forms of subsidy.

President.—You would be inclined to agree with the view of the West Indies Sugar Commission that if there were no artificial support to the sugar industry, the West Indies producing at 15 shillings a cwt. would be able to do without protection at any time?

Mr. Burt.—Yes, quite easily.

President.—You said that two-thirds is produced at greater cost?

Mr. Burt.—That is stated in the West Indies Committee's own report.

President.—If it were possible for India eventually to produce sugar at somewhere in the neighbourhood of Rs. 10 a cwt., the third condition of the Fiscal Commission would certainly be fulfilled.

Mr. Burt.—Certainly, if one could get rid of the competition of the excessively subsidised portion of the sugar industry.

President.—Exactly.

Mr. Burt.—All cane growing countries with the possible exception of Queensland and Formosa would not have the slightest difficulty in marketing their produce on the world's market at well above the cost of production.

President.—Including India?

Mr. Burt.—Yes.

President.—There is about one million tons of sugar at present imported.

Mr. Burt.—That is the figure for the last fiscal year.

President.—To what extent do you think it would be possible to establish in India sufficient factories to turn out one million tons?

Mr. Burt.—I see no reason why with organization and protection during the process of building up the industry, India should not be able to produce the whole of its sugar and even a small exportable surplus in good years which would guarantee home supplies in a year of low production.

President.—What sort of acreage would be required for one million tons?

Mr. Burt.—Our present acreage, if it were all under improved canes, would provide all the sugar we want.

President.—Without decreasing the *gur* supply?

Mr. Burt.—Yes.

Dr. Matthai.—That is to say your point is that if improved varieties of cane were adopted or in the alternative more efficient methods of production of sugar were adopted, in either of these cases it would be possible to supply this country with all the sugar stuff that it requires without any increase in the acreage under cane?

Mr. Burt.—Yes.

Dr. Matthai.—Supposing you were able to combine the two, then it would be possible, I suppose, to do with less acreage?

Mr. Burt.—Yes ultimately it would.

Dr. Matthai.—In other words if these two things were both introduced and adopted simultaneously, it would be possible to meet any further demand for sugar stuff in this country with the existing acreage?

Mr. Burt.—Yes, it would.

Dr. Matthai.—So that the problem of adding to the existing acreage under cane is not a pressing one with regard to rendering India self-sufficient?

Mr. Burt.—I think that, as a matter of fact, with the healthy development of the industry there would be a small expansion in cane growing. The three processes would go on side by side; you would get a small expansion of sugarcane growing especially in the neighbourhood of factories; you would get an improvement in the methods of manufacture—and I refer there not only to modern sugar factories, but to improved methods of making *gur* in village units, where considerable improvements are possible. Then you would also get the rapid introduction of improved varieties which would send the yield of sugar per acre well above what it is present. Viewed from every stand point we have ample resources to supply our own needs of sugar and allow a margin for increased consumption if the industry is properly organised.

Dr. Matthai.—On this question of improved varieties, am I right in thinking that the problem is much more difficult in India than in Java? In Java it is entirely a question of producing white sugar in a fairly homogeneous area, whereas in India it is a problem of producing varieties of cane, in the first place for a sub-tropical area, and in the second place for a tropical area. In the second place you have got to produce varieties of cane suitable for sugar and at the same time suitable for *gur*.

Mr. Burt.—The varieties are not necessarily different, a variety of cane which makes good sugar always makes *gur*.

Dr. Matthai.—But from the point of view of crushing the *gur* cane would have to be softer than the cane for sugar, because the kind of equipment that they have for crushing is such that if your cane were too hard, you might get less extraction. Is that not so?

Mr. Burt.—Theoretically that is so. In actual practice the hardest canes are often preferred. Amongst the improved varieties Co. 213 is the most popular in certain *gur* tracts, because the cultivator will gladly put up with the additional labour in crushing, in return for the protection he gets against damage by jackals and other wild animals.

Dr. Matthai.—You are speaking of the main sugar belt?

Mr. Burt.—Yes.

Dr. Matthai.—We got the impression from talking to people in Madras and Bombay that the problem of differentiating between the canes intended for *gur* and the canes intended for sugar is rather an important practical problem and not merely a theoretical one, because their objection to Coimbatore canes is that they are exceptionally hard.

President —Particularly in Bombay.

Mr. Burt.—That is probably because they have been using a Coimbatore cane which was never intended for that tract. Co. 213 which is the most popular of the Coimbatore canes was intended for Northern India and it was exhaustively tested in Northern India with other varieties. But it does not follow that Co. 213 is the Coimbatore variety most suitable to Bombay. There are many other Coimbatore varieties which are far better suited to Bombay conditions; I have seen them growing there and they are doing very well. Then as regards Madras, it is a truly tropical tract and can grow what are called noble canes, that is to say thick soft canes. Coimbatore has now a special substation for producing that type of seedling.

Dr. Matthai.—Is the Coimbatore sub-station working now?

Mr. Burt.—Yes, that is working. I may add that although I have suggested that the distinction between canes for *gur* and sugar, so far as Northern India is concerned, is rather theoretical in any case this point has been provided for in the research arrangements for sugarcane.

Dr. Matthai.—It means I suppose a somewhat more elaborate organisation in India for sugarcane breeding than in Java, because you have to provide for diverse requirements?

Mr. Burt.—Yes. We have also to provide for six times the area. There are no intrinsic difficulties but we are something like 20 years behind Java even now. But Java had quite serious difficulties to face when it started its cane breeding programme and I cannot see any intrinsic difficulties in India greater than those which have been overcome in Java. It is a matter of adequate organisation and adequate research work.

Dr. Matthai.—That is the point I am raising. When we assume from the point of view of the Fiscal Commission's conditions that this country could make itself self-sufficient in respect of sugar without any considerable increase in the acreage under cane, it is assumed also that during the protective period we have to make very considerable provision for research and the necessary finance.

Mr. Burt.—That is absolutely necessary.

Dr. Matthai.—That is essential to the whole problem of protection?

Mr. Burt.—Yes. Unless side by side with the protection granted to the industry a definite effort is made to organise the industry on proper lines and above all to provide adequate research, there is the risk that protection may be ineffective.

Dr. Matthai.—From the costs of Indian factories which we have seen, it seems to me that, so far as factory efficiency is concerned, Indian factories are now doing quite well. Some of them have reached, if not quite the same level of efficiency as Java, at least very near it.

Mr. Burt.—Yes.

Dr. Matthai.—Therefore the problem we have to consider is the problem of the cost of sugarcane.

Mr. Burt.—I would rather put it this way, the cost of sugar in the cane in its crude form. I mean the cost of cane allowing for its sugar content.

Dr. Matthai.—I mean the cost of sugarcane per unit of sugar.

Mr. Burt.—Yes.

Dr. Matthai.—That is the problem we have to consider.

Mr. Burt.—That is a very important problem.

Dr. Matthai.—Since the Sugar Committee reported there has been a great deal of progress so far as factory efficiency is concerned?

Mr. Burt.—There has been even greater progress on the agricultural side.

Dr. Matthai.—Would you say that there has been greater progress?

Mr. Burt.—I will put it this way: Indian sugar production by white sugar factories has gone up definitely. The number of factories has doubled and production has rather more than doubled. If you compare that with our imports, they have still gone on increasing. On the other hand we have a quarter of our sugarcane area now under improved varieties.

Dr. Matthai.—The point I was thinking of is rather different. The Sugar Committee took an average of somewhere about 6·8 per cent. as the average extraction at the time they reported. Now your average is about 9·5 per cent.

Mr. Burt.—8·6 per cent. is the last seasons average for all factories. The best managed factories have reached seasonal average of $9\frac{1}{4}$ per cent. to $9\frac{1}{2}$ per cent.

Dr. Matthai.—Is there a corresponding increase in the case of sugarcane, that is to say the yield of sugarcane per acre and the sucrose content? Has there been a corresponding increase during the period since the Sugar Committee reported?

Mr. Burt.—Yes In those areas where improved canes have been grown, the yield has gone up from about 400 maunds of cane to the acre to 600 maunds with 800 maunds well in sight. That is 50 per cent. increase in general cultivation and a hundred per cent. increase among the best growers.

Dr. Matthai.—You will admit, that if you take the cost of manufacturing sugar, about 60 per cent. is raw material cost?

Mr. Burt.—I think that is about right.

Dr. Matthai.—Supposing you are able to raise the extraction figure from 9·25 per cent. which is the figure that you have in well managed factories now to about 12 per cent. which is the Java figure?

Mr. Burt.—11·5 per cent. is the average Java figure.

Dr. Matthai.—If you raise it to 11·5 per cent., the effect of that on the final cost is not going to be very considerable. On the other hand if you are able to raise.

Mr. Burt.—Surely it would be considerable.

Dr. Matthai.—It would not be so considerable as the reduction of cost which you can bring about by raising the yield of cane per acre from say 20 tons to 35 or 40 tons. That would have a much bigger effect on the final cost of sugar than raising the extraction percentage of sugar from 9·25 per cent. to 11·5 per cent.

Mr. Burt.—It is quite easy to work it out. Supposing we take our present standard of 600 maunds to the acre with 9·25 per cent., that gives you $55\frac{1}{4}$ maunds of sugar per acre and 69 maunds at $11\frac{1}{4}$ per cent. If we raise our cane production from 600 to 800 maunds, leaving the factory efficiency the same, it means 74 maunds of sugar per acre so that an increase in cane yield of 25 per cent. would have more effect than an increase in the factory efficiency. But there is a subsidiary point here. It is not likely that the factories will get very much above $9\frac{1}{4}$ per cent. except by an improvement in the cane.

Dr. Matthai.—In the quality of the cane?

Mr. Burt.—Yes, the improvement in the quality of the cane must go hand in hand with increase in efficiency. That is very clear from the Java figures. In 1903 they had 10·97 per cent. recovery and their sugar yield per acre was 9,784 lbs. Their cane yield in tons per acre was 40. Now in 1929 their recovery was 11·8 per cent. their sugar per acre was 13,205 lbs. and their cane yield per acre was 50 tons. This large increase in factory efficiency—it is large when you get above 11—has gone on hand in hand with the development of better canes.

Dr. Matthai.—The primary point in connection with the quality of the cane from the standpoint of the factory is the purity of juice, that is to say if you have a higher purity of juice in your cane, your boiling house efficiency is better.

Mr. Burt.—The percentage of fibre also comes in.

President.—Could you give me any idea as to what they spend in Java on research and organisation annually?

Mr. Burt.—I am afraid I have not brought the figure. It is very large indeed. I can try to get it.

President.—Will you please make a note of that?

Mr. Burt.—Yes. I think that there is a figure given in the Sugar Committee's report *

President.—Considering the difficulties which my colleague mentioned in connection with the sugar industry in India, it would not be unreasonable to expect Government to spend even a larger sum than Java is spending at present?

Mr. Burt.—No. We ought to spend six times as much as Java because they have six times their area under cane.

President.—Apart from the question of cane, owing to the difficulties which Dr. Matthai was mentioning, something in addition to that might be required?

Mr. Burt.—Yes. Certainly we have got all this lee-way to make up.

President.—I think we might get some idea as to what the Government ought to work up to in spending on sugar from the Java figures.

Mr. Burt.—Yes, by multiplying it by 10.

President.—At any rate by 6?

Mr. Burt.—Yes.

President.—You believe, I understand, that there is not a great future for sugar factories in Bombay and Madras.

Mr. Burt.—I cannot say any thing about Madras because it would all depend upon the direction in which the expansion of cane growing takes place.

President.—Unless there is some radical alteration in the predilection of the cultivators down there who at present grow rice almost entirely it would be difficult to establish a cane factory?

Mr. Burt.—I am not able to say definitely.

President.—There is a definite predilection for growing rice in that part of the country?

Mr. Burt.—Yes, but there has been a fall in the price of rice. I think I am right in thinking that from the two crops of rice—which has to bear canal dues being under canal irrigation—the cultivator only gets 2,500 lbs. of paddy and at present prices that is not bringing him much more than Rs. 75 a year.

President.—With the possibility of some change in the agricultural system of Madras you think that there is some scope?

Mr. Burt.—I would not exclude the possibility of sugar factories developing in Madras. They have many natural advantages; they have the climate; they have the population; they have a high standard of agriculture and they have the canal system. When you introduce high yielding canes into a new locality the cultivators are very apt to grasp an opportunity of selling cane without having all the bother of making *gur*, so that I would not exclude Madras from the possibility of sugar factories.

President.—How about Bombay?

Mr. Burt.—Bombay is not at all typical. It is a curious position. They get probably the highest yield of sugarcane per acre in India but they get it at the expense of a lot of water and a lot of manure. I would look at it this way; from the agricultural standpoint everything depends on their being able to grow their cane with less water and less manure. If they can do that, then one might be able to organise their industry but until they

* 1,200,000 guilders or £100,000 on research alone in 1919-20.

get over the fundamental problem which the Research Council hopes to help them to do, one cannot say what the possibilities in Bombay are.

President.—No. The Bombay agriculturist produces a special kind of *gur*.

Mr. Burt.—That is so. I am told—rather our Sugar Committee was told—that the type had a definitely limited market. Of course it is a type which is so nearly our sugar that it comes into very close competition with brown sugar.

President.—But now probably the best line of advance in Bombay so far as the manufacture of white sugar is concerned is for the factory to lease lands as they have done in Belapur.

Mr. Burt.—I think that has greater possibilities. I don't think it would be possible to run factories on a cane farming system in the Deccan with cane growing under conditions such as they are now.

President.—Take Belapur for instance.

Mr. Burt.—They hold the land. They grow all their canes themselves.

Dr. Matthai.—In what direction do you propose to tackle the peculiar agricultural difficulties of the Deccan area from the point of view of sugarcane?

Mr. Burt.—We propose to tackle it as a general problem of agriculture.

Dr. Matthai.—What precisely does that mean?

Mr. Burt.—The whole question hinges upon the economic use of water—the actual water requirements of crops as distinct from what the raiyat thinks the water requirements of the crops are. It is also a question of agricultural rotations which is really a special problem in agriculture rather than a problem of sugarcane growing.

Dr. Matthai.—That is to say by allowing the cultivation of sugarcane in a proper rotation system. That is the main point, is it not?

Mr. Burt.—It seems to me that they do not rotate crops enough at present in Bombay compared to other parts of India. They grow sugarcane on the same land too often.

Dr. Matthai.—You are aware of the block system there?

Mr. Burt.—Yes.

Dr. Matthai.—The system used to demand a proportion of 1:3, that is to say one year sugarcane and the other two years green manure and some other crops. Now they are working to a proportion of 1:4.

Mr. Burt.—Even 1:4 is hardly enough.

Dr. Matthai.—If the average is, as the Director of Agriculture, Bombay, told us the other day, 1: somewhere between 3 and 4, they have advanced a good deal.

Mr. Burt.—I know that the Director of Agriculture is not satisfied with the rotation system in the Deccan. I can not claim any personal knowledge on the subject. When we discussed this question, the general feeling was that it was a general problem of agriculture and we hope to help them, but it is not certainly typical of sugarcane growing.

Dr. Matthai.—The rotation system has also improved in your main sugar belt?

Mr. Burt.—There we have established rotations and a well understood practice.

Dr. Matthai.—That is to say it is a rotation system which has been actually adopted by the cultivating population?

Mr. Burt.—Yes.

Dr. Matthai.—Here the problem is to get the raiyat population to accept it?

Mr. Burt.—Yes

Dr. Matthai.—That is the real difficulty. Am I right?

Mr. Burt.—I understand that a lot of cane growing in the Deccan is done by what you might call professional cane growers who specially rent the land, put in a good deal of capital and grow cane intensively. That class of cultivator does not like the rotations. In typical cane belts of Northern India sugarcane growing is part of the normal agricultural rotation of the country side.

President.—So, at any rate, in the immediate future the only possibility of white sugar manufacture in the Deccan is where the factory is able to lease lands?

Mr. Burt.—Yes.

President.—We understood in Bombay it would be a very difficult matter to secure lands for factories except perhaps in Sind under the new Sukkur Barrage.

Mr. Burt.—Without knowing very much about Sind, I should say Sind is probably not a good place for growing sugarcane.

President.—So that it looks as though the number of factories in the Deccan even if protection were granted would not increase to any very considerable extent; sugarcane growing for the purpose of manufacturing *gur* might increase or at any rate not decrease?

Mr. Burt.—Quite. Of course, the Deccan production is almost infinitesimally small in proportion to the total Indian production.

President.—To what extent do you think with sufficient protection that the manufacture of country sugar by the *khandsari* process would increase?

Mr. Burt.—It is difficult to say to what extent it would increase. The *khandsari* industry has persisted in one division of the United Provinces and in parts of the districts adjoining Rohilkhand. It has always been the custom to make sugar there and with the introduction of improved varieties they have been able to hold their own.

President.—They have a very local market I suppose?

Mr. Burt.—I don't think it is necessarily very local. They are well situated in the centre of Northern India.

President.—We have the idea from the United Provinces Government representation that the *khandsaris* operated in tracts which are remote where it would be difficult to establish a central factory and they supply local needs to a very large extent.

Mr. Burt.—I don't think there is any part of Rohilkhand which is really remote. Some of the *khandsaris* are near Bareilly and some are near Moradabad.

President.—They would supply the local needs?

Mr. Burt.—Yes.

President.—Probably their sugar would also be exported to the Punjab?

Mr. Burt.—Yes, and down to Cawnpore. It is very probably that a good deal of it goes to Benares.

President.—Does the local *khandsari* manufacture amount to a considerable quantity?

Mr. Burt.—My recent calculations confirmed the Sugar Committee's estimate that they might be producing close on 200,000 tons per annum.

President.—All in this particular division?

Mr. Burt.—Yes, in Rohilkhand and parts of adjoining districts.

President.—Your view is that, whatever the future for the *khandsari* is, provided protection is granted this method will be a very useful means of supplying sugar until large factories have started

Mr. Burt.—He was very important indeed during the war and certain improvements in his process have taken place. Some of them make saleable second sugar from their first molasses, others instead of trying to make

second sugar make *gur* from molasses and are getting something like 5 to 5½ per cent. of first sugar on cane and about 1¼ per cent. of *gur* in addition, so that their total recovery is not too hopelessly bad. When you allow for the small capital involved and the small cost of improvements they are likely to continue for some considerable time.

President.—Do they manufacture molasses at all? Or does all the molasses go to the manufacture of *gur*?

Mr. Burt.—They are now making second *gur* which is a comparatively modern development.

Dr. Matthai.—You get the second *gur* where the centrifugal is used?

Mr. Burt.—Yes. When you centrifugal your *rub*. You get from that sugar and molasses and by the process which has now become feasible that molasses is turned into *gur* which is quite easily saleable. Otherwise the *khandsaris* dispose of their molasses by selling it to tobacco merchants.

President.—If they make second *gur* from first molasses, do they have any molasses to sell?

Mr. Burt.—No.

President.—All that goes into *gur*?

Mr. Burt.—Yes.

Dr. Matthai.—Assuming that white sugar is sold in Calcutta at Rs. 10, I assume in Cawnpore the price would be somewhere about Rs. 11-4. If that is so at what price would the *khandsari* sugar sell? Would there be a difference in price?

Mr. Burt.—I think you cannot depend on any difference in price. There is a slight sentiment in favour of *khandsari* sugar, but I don't think you can depend on it any longer. Every *khandsari* will tell you that he gets a slightly better price for his sugar than the factory does.

Dr. Matthai.—How does it compare in point of appearance?

Mr. Burt.—It is not so good. It is slightly yellowish. It is not quite white, but that is not necessarily objectionable.

Dr. Matthai.—So long as there is a sentiment in its favour?

Mr. Burt.—Yes.

Dr. Matthai.—Supposing that sentimental preference disappears, the fact that it is slightly inferior in appearance, inferior in polarisation I suppose, may mean that the *khandsari* may get a lower price than the white sugar?

Mr. Burt.—That may happen eventually.

Dr. Matthai.—How does it taste?

Mr. Burt.—Quite well.

President.—Would you consider that the manufacture of *khandsari* sugar has any future; when the industry of white sugar manufacture in central factories is established and is able to compete against foreign sugar without protection, where would the *khandsari* stand?

Mr. Burt.—By that time he would have been absorbed as a shareholder in the central factory.

President.—You contemplate then a series of stages in the development of the industry. First of all, the *khandsari* manufacture for about 10 years or so and then some central factories start in which the local *khandsaris* take shares.

Mr. Burt.—The *khandsari* is manufacturing sugar now. He has never ceased to manufacture. With improved canes you may take it roughly that when he gets Rs. 12 per maund for his sugar, say at Shahjahanpur, he would be able to pay something like 7 annas per maund for improved canes. The cane supply is local of course and he would not have to collect his cane from a large area. Individual *khandsaris* to whom I have talked realise the shortcomings of their process and I think many of them would willingly come into an organisation for a central factory. They are people who are

accustomed to make contracts for sugarcane indeed there is a well established practice of selling cane on the basis of juice. They have the whole organisation necessary for dealing with a number of cultivators. They are semi-agriculturists themselves and many of them are small zemindars. There is a definite possibility that they may be a valuable feature in the organisation of the new industry.

President—That is to say if they obtain a satisfactory profit they would gradually extend their present operations till they have got to such a stage as to merge themselves in the central factories?

Mr. Burt.—Yes.

Dr. Matthai—Essentially it is a wasteful process, as it is carried on at present, the percentage of extraction being only 5?

Mr. Burt.—That is so and yet if you take their best, they get 5½ per cent. sugar and 1½ per cent. of *gur*, the total being 7½ per cent., which is more than some of the white sugar factories are getting.

President—Do they use motor power or engines?

Mr. Burt.—They are now using small power-driven mills for crushing the canes. They are using oil engines for that purpose and also for driving their centrifugals.

President—They don't depend on bullock power?

Mr. Burt—Not entirely: the use of three roller power mills has spread considerably.

President.—I think you mention that in some cases they buy the juice?

Mr. Burt.—Contracts and payment are made for juice. The *khandsari* has the cane crushed near his factory and pays the cultivator for the juice he gets.

President.—He buys the cane on the juice extraction basis?

Mr. Burt.—He actually weighs and pays for the juice.

President.—What about this question of licensing factories?

Mr. Burt—It does not seem to be workable. I agree with the Indian Sugar Committee on that point. While it has a good deal to recommend it, it does not seem to be a workable proposition. I do not see how we could be certain of protecting the cultivator against being exploited, and that would be essential to any system of licensing.

Dr. Matthai—Supposing this licensing system were arranged on the following basis: a factory is erected in a particular area and everybody who grows sugarcane within 10 or 20 miles of that factory has got to supply his cane to this factory. The grower may not supply sugarcane to any other factory but he may supply it to a *gur* producer if he cares to. The only thing he is obliged to do is not to sell to another sugar factory in that area.

Mr. Burt—What would the cultivator get in return for it?

Dr. Matthai—The cultivator is safeguarded to some extent by the fact that he can decline to supply the sugar factory.

Mr. Burt.—That is no real protection because the cultivator very rarely owns his own mill or *gur* boiling pans. There is a regular industry in the hiring of bullock mills and boiling pans and very many firms maintain a staff for keeping these in order. If in a certain tract the cultivator gets into the habit of selling his cane to a factory these people who hire out the mills will find their business gone. They will cease sending men and supplies down to that tract and when an individual cultivator in that particular area wants to make *gur* he may find it extremely difficult to get the mill or the boiling pan. Once cultivators have discontinued the manufacture of *gur* for a certain period it would take time to organize the *gur* industry again.

Dr. Matthai.—So that element of protection would disappear?

Mr. Burt—Yes.

Dr. Matthai—Supposing the position is this. If a factory is licensed the licensing authority has a hold on the factory provided it is a part of the licensing condition that he must pay for his cane according to a sliding scale?

Mr. Burt—It would have to be a very strict sliding scale, but even so I am not satisfied that you could fully protect the cultivator. To begin with one would have to be certain that the sliding scale was always fair and it would be also necessary to ensure its being adhered to.

Dr. Matthai—The difficulty of applying a sliding scale under present conditions is this, that the price of sugar varies under the present completely free trade conditions and the amount paid for sugarcane under the sliding scale would also vary. It might go down to a point at which it would be unprofitable to the cane grower, but supposing the scheme of protection was based on the idea that a certain figure was to be the stabilized price for a fairly definite period and the duty so adjusted that that figure was maintained, then your sliding scale becomes a different affair from the point of view of the cane grower?

Mr. Burt—That is true but you have still have to ensure that the grower receives the money he is supposed to get. Licensing of areas would put very big powers in the hands of the factory. What would happen, for instance, if the factory refused to take all the cane that the cultivator grows?

President—It would be necessary to have some sort of supervising authority. I think in Cuba they have the same system.

Mr. Burt—In Cuba many individual growers are very big men. There the cane farmers settle the sliding scale by agreement with the factories. I do not think there is any licensing of areas.

President—Even in Cuba there is some sort of Government notification from time to time as to the amount of sliding scale.

Mr. Burt—In itself the sliding scale is an excellent thing. I am afraid of licences which would give a monopoly to factories of all the cane within a certain radius.

Dr. Matthai—How can you have a sliding scale and enforce it unless you have a licensing system?

Mr. Burt—A sliding scale is economically sound. There is a sliding scale system working in North Bihar now—it is not quite so good as the one recommended by the Indian Sugar Committee—but it has been a protection to the grower and also to the factories.

Dr. Matthai—I don't understand your position. If you are in favour of a sliding scale and if you think that a sliding scale is of advantage, it appears to me that that sliding scale is of no use unless there is some means of enforcing it.

Mr. Burt—Without a scale and agreements we should go back to the position which hampered the Indian white sugar industry in its early days when the supply of cane to the factory was inadequate. Once factories adopted the sliding scale and made definite agreements with cane growers they obtained a much more adequate supply of cane.

President—And the factories in their own interests must adopt some fixed system of supply of cane?

Mr. Burt—Yes. The sliding scale is of advantage both to the factory and to the grower.

Dr. Matthai—The only object in your proposing a sliding scale in your report is to give a certain guidance to the factory?

Mr. Burt—If you are giving the white sugar manufacturer protection it is perfectly legitimate to require him to pay a certain price to the grower. Whenever you give assistance to the manufacturer in an agricultural industry it is quite sound to say that in return for this he must do something.

for the grower. Take the case of the West Indian Commission. Their recommendation was to give certain assistance to the sugar factories on the understanding that they were to pay growers not less than 12s 6d per ton for cane.

Dr. Matthai—If the assistance was given to the factory in the shape of a subsidy, the scale could be enforced, but if it were given in the shape of a duty how could it? The factory gets the benefit of it.

Mr. Burt—Personally, I don't think it would ever be necessary to enforce the sliding scale by legislation but, should it be necessary to do so, I would not hesitate so long as the manufacturer was getting a substantial measure of protection. It is only a matter of protective machinery as to whether the manufacturer gets protection through a duty or through a subsidy. If he is getting protection for his industry Government is perfectly entitled to say that the other partner, namely the grower, must get his share of protection also.

Dr. Matthai—If I am giving a bounty to every sugar factory in this country then as a condition of the bounty I can say "you are not going to get it this year because you have not paid your grower so much." But where assistance is given by means of a duty you have not got the means of enforcing it on the manufacturer.

Mr. Burt—Except of course by special legislation which I do not think will be necessary. May we come back to the earlier point, namely, what is the object of licensing factories at all?

Dr. Matthai—One advantage is this: suppose we decide to grant a higher rate of duty, what we consider an adequate rate of protection for the sugar industry. The sugar industry may then become a profitable business in this country. Now, as far as I understand conditions in this country, the result of that would be attempts to float factories in the same area to an extent which was more than the area could bear. If that danger arises we must have the means to see to it that it is prevented, otherwise the whole measure of protection becomes ineffective. Supposing the sugar industry is put on a thoroughly paying basis and you get two or three factories crowded together in the same area, the result would be that they would not be getting all the cane they wanted and their overheads would go up and they would be unable to take advantage of the protective scheme, in other words you are providing for a sort of system which would make for its own failure.

Mr. Burt—If Government allowed each factory a certain circle and said "you are entitled to all the cane within the circle" the result might be to actually keep down production because factory capacity was not big enough to deal with all the cane produced, it cuts both ways.

Dr. Matthai—If a factory has the possibility of making sugar and making profit out of it, it is worth while to enlarge its output.

Mr. Burt—I admit that there is a good deal to be said in favour of licensing.

Dr. Matthai—Have you any information about the way in which this system works in Formosa?

Mr. Burt—In Formosa if a man grows cane at all he is required to deliver the cane to a specified factory.

Dr. Matthai—I understand the whole success of Formosan development is based on this.

Mr. Burt—That may be so. It may be an essential feature of their organization, but the development of Formosa's Sugar industry is primarily due to the high protection and direct assistance given to the industry. The internal price of sugar there is Rs 17 per maund.

Dr. Matthai—That high rate of protection would have been ineffective but for this licensing system?

Mr. Burt—I suggest as an alternative to licensing by Government that factories should form themselves into associations and agree not to invade one another's area for the purchase of cane and also agree that new factories should only be set up where there is likely to be a surplus. Secondly I think that the question of indirect help to factories in new areas is a matter which will have to be very carefully examined, that is to say one might give definite inducements to start new factories where they are wanted.

Dr. Matthai—We raised this question specifically in our questionnaire but I find that the Imperial Council of Agricultural Research has not expressed any opinion on that.

Mr. Burt—Our Sugar Committee was opposed to licensing the question was discussed at considerable length last January.

Dr. Matthai—Would you mind giving us a note on that point later on?

Mr. Burt—I will certainly do so.

Dr. Matthai—If you will kindly discuss that point in the note.

Mr. Burt—Certainly. The main reason why our Sugar Committee objected to licensing was that they held that it could not ensure the grower being protected against exploitation.

President—Getting back to the question of protection to the cultivator, if any protective duty or any form of assistance was introduced clearly it would be necessary for Government to see that the benefit of that assistance filtered down to the cultivator. Will it be possible to ensure that a fair price would be paid to the cultivator by some method such as this: it might be so arranged that the legislation for protection included a clause under which all manufacturers of white sugar whose factories came within the meaning of the Factories Act should be compelled to forward to the Imperial Council of Agricultural Research or any other authority appointed for this purpose such returns as might be required from time to time?

Mr. Burt—I think that is very desirable from many points of view and not only from the point of view I mentioned just now.

President—On the report of the Imperial Council to the Government that, speaking generally, the cultivator was not getting a fair price it might be possible for them to take action.

Mr. Burt—If it arose. There are many ways in which the question can be dealt with. Personally I do not fear that the grower will not get the benefit of protection but I am not sure that he would be protected if licensing of areas were introduced.

President—You would in any case recommend that some clause should be introduced in any legislation providing that factories should make such returns to the Imperial Council as is required?

Mr. Burt—Yes, because when an industry is being protected in order to enable it to establish itself firmly, I do think that Government should know what the economics of the industry are and how they are changing from year to year. Secondly, it would be an enormous advantage if certain information which is not really very confidential could be provided to the central body in order that factories in general might be advised when they are going wrong or when their efficiency is low. For example the Research Council has now appointed a Technologist whose value to existing factories will be largely determined by the extent to which he gets information about their technical results. The essence of the Jiva system is the complete pooling of all information of that type.

President—You think it is absolutely essential for the future organization of the industry?

Mr. Burt—I regard it as very important. I hope that in course of time a strong association would be formed of sugar manufacturers which

would largely deal with this question and eventually finance the research work

President—But in the first stage this work should be undertaken by the Imperial Council of Agricultural Research

Mr Burt—Yes, as we are already providing technological assistance

President—Do you think the returns should be forwarded to the Imperial Council and not to the local departments of agriculture?

Mr Burt—The local departments of agriculture should be kept in touch with the progress and they should get all the information they need from us, I think that such returns should come to us in the first instance. An undertaking would have to be given that no individual firm's position would be disclosed in any way. The knowledge pooled would be used for the benefit of all without disclosing names. That can be done quite easily.

Dr Matthai—Can you specify the sort of information that they might be asked to give without disclosing their position to competitors?

Mr Burt—That is difficult because I am not a sugar technologist, but information relating to the efficiency of the mill, the efficiency of boiling, and the behaviour of different varieties of cane should be supplied to the Research Council. It is to nobody's real interest to keep such information secret.

President—If we were considering a practical proposal on those lines it would be possible for your sugar technologist later on to give us the sort of information that might be called for from the factories?

Mr Burt—Certainly. As a matter of fact the Indian Sugar Committee made a definite recommendation as to the details which should be supplied (App V, page 371, Report of the Indian Sugar Committee).

Dr Matthai—If I were in the United Provinces and I had five other factories competing with me on the basis of that information, I could regulate my prices if necessary to cut my competitors out from there.

Mr Burt—The individual returns would go to the Imperial Council. They would not be shown to competitors.

Dr Matthai—You would be expected to keep them confidential?

Mr Burt—Yes, for example the Central Cotton Committee has collected a good deal of detailed information regarding the spinning capacity of different Indian cottons from different mills. The general conclusions were supplied to everybody but no single firm's information was disclosed. As a matter of fact we had no difficulty in getting such information from mills on this understanding.

President—In addition to that you would have some statement as to the rates paid for cane?

Mr Burt—Yes. That doesn't give all the costs of production.

Dr Matthai—If you know then sucrose content and then percentage of extraction and the yield per acre and so on, you can work out the costs. I can understand that, if it is suggested that this information should be furnished to the Imperial Council of Agricultural Research for their own information and not for publication, it might be a different matter.

Mr Burt—Certainly I would not put any firm in the position of giving its cost details to competitors.

President—Your technologist after seeing the returns from one factory might go down to that factory and find out what the reason was for any increase in cost, on the basis of his experience in some factories he might also advise others.

Mr Burt—That is what every factory belonging to the Association in Java does.

President—If you are giving the industry protection you are giving it so that not one factory but the whole industry might be built up and they might all be able to stand without protection. As a condition of

that protection it would be quite reasonable to ask all factories to co-operate in giving such information as would enable the Imperial Council to see that a good sound industry is built up

Mr Burt—Yes that is my point

President—If they are not prepared to do that, then they must waive their claims to protection

Mr Burt—As is stated in our written evidence the work is only secondarily an industrial one. The claim for protection is primarily made from the point of view of the sugarcane grower

President—It is of considerable importance to the factory too

Mr Burt—Yes. Personally, I don't see any difficulty once they are assured that details of individual factories will be kept confidential. As a matter of fact many factories now supply the Sugar Bureau with a lot of detailed information which does not go outside the Bureau except in the form of tabulated statistics which are so arranged that it is impossible for any factory to find out exactly what another is doing

President—Have you any information as to the latest Java costs?

Mr Burt—Not any direct information. Several different estimates have been given. Pijnsen Geerligns gave two figures to the Economic Committee of the League of Nations. One was a gross figure including overhead charges which was 2.17 cents per lb and he gave also a net figure which was in the neighbourhood of 1.9 cents per lb. That was for 1926-27. Since then the yield of sugar per acre has been pushed up by another 2,000 lbs due to the introduction of better canes and Java factory efficiency has gone up. It is not unlikely that their net cost of production, not allowing for depreciation, profits and so on may be in the neighbourhood of 1.23 cents. For some years Java has ceased to publish official costs of production

President—1.23 cents, what would that be "All in"?

Mr Burt—Probably 1.67

President—That corresponds to about Rs 6 a cwt?

Mr Burt—Yes

President—What would you consider a normal price for white sugar imported into India?

Mr Burt—You mean what we might consider a reasonable price?

President—Yes

Mr Burt—Rs 10.8 a maund at the ports, Rs 11.8 or Rs 12 up country

President—Roughly Rs 6 a cwt c.i.f.

Mr Burt—That is a pretty low price

President—There is a certain amount of competition even if demand and supply are balanced owing to these bounties and subsidies

Dr Matthai—The c.i.f. price which would correspond to a duty paid price of Rs 10.8 a maund would be Rs 8 a cwt

Mr Burt—It is extraordinarily difficult to guess what one might call a fair price of sugar unless you take the cost of production of different countries and the question is immediately complicated by the bounties. Looking at it in another way, before Cuban sugar became almost unsaleable one looked on 2 cents a lb f.o.b. Cuba as a reasonable price for 96 per cent sugar. That is 112d per cwt which is Rs 6. That is looked on by most sugar producing countries as a very low price

Dr Matthai—In fixing the degree of protection, what sort of price might we take as the basis?

Mr Burt—I should think round about Rs 12 up country

Dr Matthai—I mean the c.i.f. price

Mr Burt—At which other countries are likely to produce?

President—In estimating the protection necessary we take what we consider a fair selling price for the Indian industry and we compare that with the import price and the difference is the measure of protection. In estimating the protection of that sort for a long period, what would you consider a basic c i f price?

Mr. Burt—It is extraordinarily difficult to say.

President—There are certain indications. For instance I understand that there was a question of restriction some time ago. In Java the manufacturers refused to consider the question of restriction until the price fell to 2 cents a lb. Then again if Java's production costs are low as compared with other countries they would be in a position to reduce their price, it must be remembered that even if supply and demand are balanced owing to the protection in force in other countries, there may always be severe competition at certain seasons of the year.

Mr. Burt—Purser Geddis quoted the gross price of production in Java in 1926 as 2.47 cents per lb. allowing for rates, taxes, renewals and repairs corresponding to 1.9 cents per lb. nett. Then the Economic Committee of the League of Nations itself to whom this memorandum was presented took 1.73 cents per lb. as Java's cost of production.

President—1.73 cents is the nett cost without overheads?

Mr. Burt—Yes. I think it might be safer to take the figure which the West Indies Commission adopted. I think I am right in saying that the cost of production there is in the neighbourhood of 15 shillings a cwt.

Dr. Matihar—You mean the West Indies?

Mr. Burt—Yes, that is what they quoted.

Dr. Matihar—That is not what we want. We want you to suggest what according to your reading of the situation is going to be the price for the next few years at which normally sugar would be imported into this country.

President—Assuming the present depression has disappeared, what could we take to be the normal price for the next 15 years at which sugar would be landed c i f in India?

Mr. Burt—It is quite impossible to prophesy that except by going back to the cost of production of the big producers.

President—The main factor would be the cost of production in Java.

Mr. Burt—Java and Cuba.

President—Because presuming that the existing system of protection in other countries continued, Java would be faced always with competition.

Mr. Burt—Java and Cuba manufacturing costs are not far apart and between them they produce 8 million tons of sugar, most of which at any rate has to be sold on the free market. Cuba has a preference on something like 3 million tons in the United States but it is a partial preference, so that Cuba and Java costs of manufacture must dominate the world price.

President—It comes back to 2 cents a lb.?

Mr. Burt—Yes. Apart from any actual rate war due to the accumulation of stocks, lack of finance in Cuba and things of that kind, these two big producers can certainly sell at 2 cents a lb.

President—We would not be too far wrong if we take 2 cents a lb. or Rs. 6 a cwt. as the approximate c i f cost after the present depression has passed.

Mr. Burt—I agree but I would not like to prophesy how long the present depression is likely to last. It is very intense. There is no real hope at present, because European beet producers especially Russia are pushing up their areas and that of course is closing Cuba's alternative market for over 2 million tons of sugar.

President—Russia has gone up to one million hectares.

Mr. Burt—Yes. The official Russian Report is considerably higher than either of the two principal European Statisticians have taken. It is about 10 per cent higher. The latest report was that Russia expected to make 2½ million tons of sugar in 1930. That is looked upon with some doubt but it is admitted to be possible if the Russian beet factories are sufficiently well run.

President—In what directions are there possibilities of an increased output apart from Russia?

Mr. Burt—Most of the Continental beet producers have increased their area during the current season.

President—I was thinking of the competition for the Indian market. If you were manufacturing more sugar in India, it would mean so much more Java sugar displaced and therefore still more intensive competition would result. To that we have to add the increased acreage in Russia and some increase in the other Continental countries. Therefore from that point of view the present depression might continue.

Mr. Burt—That is my point. That is why I hesitate to say how long this depression will last because somebody has got to give way and it seems to me extraordinarily unlikely that the two countries which produce sugar cheapest would give way permanently. They might agree to temporary restriction to clear up a bad position. They would certainly not agree to a permanent restriction of their production.

Dr. Matthan—I suppose the big reductions in costs which have taken place in Java during the last two or three years are due to this new P. O. J. 2878?

Mr. Burt—Mainly I think.

Dr. Matthan—Since P. O. J. 2879 has covered nearly 95 per cent of the area under sugarcane in Java may we take it that no further developments of this startling kind need be expected?

Mr. Burt—I certainly would not say that. Some people said seven years ago that Java must have reached the limit. In 1925 when there was no P. O. J. 2878 under cultivation at all, they were producing 11,191 lbs of sugar per acre on the average for the whole island. That is well over 5 tons of sugar per acre and in that year the yield on cane was 11.89 per cent. No one imagined then that they were going to increase their production by another 2,000 lbs of sugar per acre. If we look at the figure for the best factory in 1929 it was 9½ tons of sugar per acre, that is the production of a factory for the whole season. Take their best residency—which corresponds to a district in India. The average yield of sugar per acre is 11,408 lbs.

Dr. Matthan—How much is that?

Mr. Burt—Nearly 7 tons. It is not possible to say that Java has reached the limit. It is unlikely that anything so dramatic as P. O. J. 2878 will come within another five years but this process of introducing better varieties, testing of those varieties and studying the factory efficiency is very highly organised and is absolutely continuous.

Dr. Matthan—If from now onwards we seriously take up the question of research and development, the introduction of new varieties and so on, although the present advance of Java as compared with India may be maintained India is not likely to go back, and the present relative position may be maintained.

Mr. Burt—The present relative position may be considerably improved. We can get 800 mounds per acre which can be easily achieved combined with an improvement in the quality of the canes. When we have achieved that, our relative position would be very much better.

Dr. Matthan—Supposing we took 2 cents a lb as representing the cost of Java making allowance for depreciation and so on, supposing we took that as the basic price for the protective period, could we assume

that if there was any further improvement in the cost of Java that would be more or less off set by corresponding improvements in India?

Mr Burt—Yes but one must remember that we do not know Java's costs. There is every indication that 2 cents a lb gives the Java manufacturer a very handsome profit. Take for instance their last year's dividends.

Dr Matthai—Unless you can tell us that the dividends have not come out of the reserves, we cannot draw any inference from the dividends.

Mr Burt—I doubt if they could have paid dividends from their reserves on such a large scale. These figures are all taken from the International Sugar Journal. One factory paid 42½ per cent, another 80 per cent, another 20 per cent and so on.

President—What year is that?

Mr Burt—These dividends have been declared in 1930.

Dr Matthai—Those are the rates on the original capital, but on the present market value of the shares 30 per cent may possibly mean 5 or 6 per cent.

Mr Burt—Yes.

Dr Matthai—Therefore in order to give the present shareholders say 5 per cent there is nothing unreasonable in taking the money out of the reserve fund. As you know, most of the shares changed hands 5 or 6 years ago when the sugar prices were higher.

Mr Burt—Most of these factories have paid better dividends this year than last year. (Read the 2 years dividends without the names of companies.)

Dr Matthai—How many companies have been mentioned?

Mr Burt—Altogether 15.

Dr Matthai—They are the very best out of 150 I expect?

Mr Burt—That may be.

President—How many companies are there in Java?

Mr Burt—I cannot tell you off hand.

Dr Matthai—The Associated Mills number about 147.

Mr Burt—There are many companies with several mills.

President—Could you say how many companies there are in Java?

Mr Burt—Not off hand.

President—Can you find it out for us?

Mr Burt—Yes. I will do so.

President—Can you also find out the dividends paid by them for the last three years?

Mr Burt—I will try to do so.

Dr Matthai—Even in the worst period of depression there might be half a dozen companies declaring fairly high dividends.

Mr Burt—Yes.

President—These dividends that you mentioned were for 1929?

Mr Burt—Yes.

President—In 1929, what was the price?

Mr Burt—In April 1929 Calcutta prices started at Rs 9-7 per maund, ran down to Rs 8-3-6 and then went up again to Rs 8-11-6.

President—That is for 1929?

Mr Burt—For 1929-30. In the previous year (1928-29) the prices ran from Rs 11, down to Rs 9 and then up to Rs 10.

Dr Matthai—These dividends have been based on the 1928-29 working?

Mr Burt—I presume that the 1928-29 figures were based on the 1928 crop

Dr Matthai—Take 1928-29. In the month of September the price in India was Rs 9-0 a maund. Rs 8-4 was the duty then per maund. That gives you Rs 6-5 as the c.i.f. price. Today the price of sugar in Calcutta is roughly Rs 8 a maund.

Mr Burt—Yes, it has gone up a little lately.

Dr Matthai—That is a price of Rs 4-1, that is to say there has been a decline in the duty free price from Rs 6-5 to Rs 4-1, and they might not declare the same dividends this year.

Mr Burt—I don't suppose they will.

Dr Matthai—It is a fall of nearly 30 per cent.

Mr Burt—That is so. But the point is that P. O. J. 2878 having fully established itself just at the moment when the competition is keenest, we do not know how well Java can meet competition. They are much better able to do so than they were 2 or 3 years ago.

President—With the price at Rs 6 a cwt., these companies would be able to declare very reasonable dividends.

Mr Burt—Yes. I should think so.

President—So that the indications are that the normal price the Indian industry might expect to have to compete against is somewhere about Rs 6 a cwt.?

Mr Burt—Yes.

President—You consider that if a protective duty were introduced, this in itself would not really put the Indian sugar industry on a proper footing. It would be necessary also to undertake very considerable development and research work.

Mr Burt—Yes, because development on the agricultural side alone would simply produce more *gum* than India can absorb, that is to say we should be left with a surplus of *gum* and a shortage of sugar. Therefore we have to organise the industry thoroughly throughout.

President—Assuming that the industry is protected, even then it would be necessary for you to establish the industry on a proper basis and to undertake a large amount of research and organisation, you cannot do

Mr Burt—That is absolutely essential that unless you have some assurance of regular finance.

President—Which alternative do you contemplate? Do you contemplate that Government should finance research or that finance should be provided through the companies by means of a cess?

Mr Burt—I think at the outset it may be the Government must come forward to help the industry with funds for research. If the Imperial Council of Agricultural Research were provided with funds, during the period of protection, they could organise the supply of information and the research. When the factory industry has become larger it should have its own research organisation and then it ought to be able to finance it. But research is wanted very largely from the point of view of the sugarcane grower as a whole whether he is making *gum* or is selling his cane to the factory. I think that ought to be a Government arrangement. That does not necessarily mean that it could not be partly financed by a cess but as money has to be spent for the benefit of the *gum* making and the *khandani* sugar industries it would perhaps be simpler if one could have an assurance that funds would be forthcoming from the Central Government.

President—Do you think that it would be desirable for the organisation and research to be undertaken by the Imperial Council of Agricultural Research so far as the industry as a whole is concerned? Or would you prefer the factories themselves to undertake this work?

Mr Burt—At present there are about 29 or 30 factories. That is not a big enough body to organise research in sugar manufacture unaided. When the industry gets larger, it will be possible for more and more technological research to be undertaken by it. But I think that, to begin with, the research council would have to organise the whole of the research. That is the view we took when the Government of India gave us some funds at the beginning of this year. We have provided for a sugar technologist as one of the primary needs of the industry.

President—You contemplate at the commencement that research and development work should be taken up by the Imperial Council?

Mr Burt—Yes.

President—And that it should be organised by Government?

Mr Burt—Yes.

President—You think that Government should give some undertaking that there would be adequate finance each year for this purpose?

Mr Burt—Yes.

President—If any protection was introduced legislation should also include a clause sanctioning the imposition of a cess on the manufacture of white sugar when this is considered desirable? Is that your view?

Mr Burt—Yes, my own difficulty about a cess at this moment is that the cess if imposed could only be collected from the white sugar manufacturers.

President—Yes.

Mr Burt—That is to say, the white sugar manufacturer in a modern factory. He forms such a small proportion of the whole that it would not be fair even though he is compensated by the protective duty, that he should be asked to pay a cess for the benefit of the whole sugarcane industry. I do think that the time will come when the industry—the manufacturing industry—should organise itself and should have a cess which would be imposed by legislation, to control the cess funds a statutory body should be created or an Association recognised in the Act by which this cess is levied.

Dr Matthai—What is the sort of proposal that you would favour for the immediate future? Assuming protection is recommended by this Board and Government accepts the proposal and there is a Sugar Protection Act next year, when that is being considered in the Assembly, supposing the two alternatives with which you are faced are those. Government gives an undertaking that an adequate sum would be provided for sugar research and organisation for the next so many years—that is one alternative. The other alternative is along with that Government definitely provides for a cess, a definite statutory body and a definite statutory income for that body—the whole thing to be put on a permanent basis. If you had to make an immediate choice, which of these would you prefer?

Mr Burt—As an immediate choice I would say “secure an adequate annual grant to the Imperial Council of Agricultural Research for the whole period of protection.” That I think is the first step.

Dr Matthai—As an immediate thing you would prefer that?

Mr Burt—Yes.

President—Supposing the Imperial Council was adequately financed I imagine that individual factories would still have scope for considerable development work, for example, trying out various kinds of manures?

Mr Burt—That is more the task of the Provincial Departments of Agriculture. For instance in North Bihar the various factories have helped in the introduction of improved canes and in the introduction of new manures, but the real duty lies on the provincial Departments of Agriculture, they can be best assisted through the Research Council.

President—Of course the sugar companies are handicapped in the matter of organisation by the fact that they are not making very much in the way of profit at present

Mr. Burt—Yes

President—Supposing they are making satisfactory profits would the development work continue?

Mr. Burt—I think so. I do not think that any Agricultural Department has failed to get such co-operation, when factories were making profits. When they were making better profits, they were certainly pushing the growth of improved canes.

Dr. Matthai—Would that be enough for a really adequate scheme of research and development, adequate that is, to ensure that the scheme of protection is effective?

Mr. Burt—I think it would. For several years we have not only to start research, we have to start an organization for the training of skilled workers and a sugar technologist at Cawnpur quite apart from agricultural research.

Dr. Matthai—Are you in a position to give us anything like an approximate estimate of the amount of funds which the Imperial Council would require for sugar research and development on the basis of sugar being a protected industry?

Mr. Burt—Not less than Rs. 10 lakhs a year.

Dr. Matthai—Would you have sufficient schemes in hand next year to spend effectively Rs. 10 lakhs?

Mr. Burt—Yes. We have been given Rs. 10 lakhs with no promise for the future. All we are able to do at present is to finance schemes on a five year basis or for shorter periods. In other words we can spend an average of 2 lakhs per annum for 5 years. We have schemes in hand for nearly another Rs. 10 lakhs—again calculated on a five year basis.

President—What you want is a recurring grant?

Mr. Burt—Yes. When we started I made a rough estimate of what was wanted for five years. That estimate ran up to Rs. 96 lakhs or about Rs. 7 lakhs a year. Knowing that our funds are limited we had to cut down schemes.

Dr. Matthai—If financial considerations or rather financial rules do not stand in the way, for what sort of period do you want a promise as regards annual grants?

Mr. Burt—I would put it for the whole period for which protection is given so that you may be certain that your industry is not only to be put on its legs but kept on its legs. We shall need this money until the industry itself is able to take over part of the burden—it can never take over the whole burden because I do not foreshadow the loss of the village gur market in the next 20 years. So that possibly for some such period as 10 or 15 years the Imperial Council of Agricultural Research ought to be able to secure this annual grant of Rs. 10 lakhs.

Dr. Matthai—Supposing the financial rules were going to be in the way, what sort of minimum period would you require?

Mr. Burt—I will put it another way. If financial rules stand in the way, take advantage of the constitution of the Research Council which permits of its accepting lump sum grants and then from the high receipts due to the new tariff during the first two years Government could hand over to us, say, a couple of crores of rupees as a special sugar fund for Research work and the like.

Dr. Matthai—As a sort of consolidated grant for a period of years?

Mr. Burt—Yes, like the lump sum grant made to us when the Research Council was established.

Dr. Matthai—Then the line the Finance Member may take is this he may say "I can't possibly bind my successor in office, all that I can do is that I can promise adequate financial assistance in the shape of an annual recurring grant for say the next three, four or five years"?

Mr. Burt—Then I would offer this alternative. I would say "You may be fairly certain that for the first three years there will be no great fall in sugar imports except in so far as a rise in price may restrict consumption. The imports are not likely to be less than 800,000 tons so that each rupee a cwt. in the protective duty would represent Rs. 160 lakhs, hand over to the Imperial Council of Agricultural Research a large share of the additional revenue that you receive in the first two or three years. In the first two or three years with a fairly high protective duty Government is bound to get a very large temporary revenue. If they do not wish to bind the Assembly in regard to the future let them hand over a large sum of money to the Research Council in the first two or three years. There should be no opposition because the Assembly itself is represented on the body of the Council."

Dr. Matthai—Rs. 160 lakhs would mean Rs. 10 lakhs for 16 years.

Mr. Burt—Yes. One rupee is purely an illustrative figure to show that the magnitude of Government's increased revenue is sufficient to hand over all we require in the first two or three years of the new duty.

Dr. Matthai—Supposing the Assembly was not in a generous mood and finances were not in a prosperous condition, if it came to the question of the minimum period what would you suggest?

Mr. Burt—10 years is the minimum period, otherwise we cannot expand the research schemes which we need many of which involve capital expenditure which would not be justified unless there is a chance of continuity. I do wish to lay stress on one most important point. It is not merely a question of research work for a short period only. Research work must be continuous. I would like to see the industry itself after the protective period, relieve Government of the burden of much of the research. It is continual research which has enabled Java to hold her own and to be in her present commanding position.

Dr. Matthai—When exactly does your Sugar Committee report?

Mr. Burt—It does not necessarily report at all. It is a standing committee. It deals mainly with research schemes. Our interim report dealt largely with the question of tariffs.

Dr. Matthai—Would it be possible for you to let us have a detailed statement of the proposals your Committee is making sometime before we write our report?

Mr. Burt—I can let you have a list of the research schemes sanctioned.

Dr. Matthai—With the estimated expenditure?

Mr. Burt—Yes. You will understand that the Committee is working continuously.

Dr. Matthai—I just want to know what is the sort of proposals which the Sugar Committee formulated, plans of which are now in hand. I would like to know what proposals have been definitely considered and are ready to be put into operation and what is the sort of expenditure that they will involve?

Mr. Burt—I will give you a statement of the schemes sanctioned, the schemes under examination and those recommended, if you will let me know in what month you want it.

President—Supposing a million tons of sugar is produced in India what are you going to do with your molasses?

Mr. Burt—I think it would largely replace imported molasses. Then there is the possibility of establishing factories for manufacturing industrial spirits in the country. I don't know what the imports of industrial spirit are but they must be truly substantial, and if India could get cheap in-

dustrial spirit it would certainly give a filip to certain chemical industries. The molasses imported in 1928-29 was 68,576 tons, and in 1929-30 it was 71,761 tons.

President—Could it be used as manure?

Mr. Burt—I don't think that is likely. We might use a certain amount as cheap cattle food but it would have to be much cheaper than the present prices before the use of molasses as manure could be thought of.

President—At any rate it would be reasonable to suppose that when you turn out one million tons of sugar the price of molasses will be very small?

Mr. Burt—It would be obviously cheap, much cheaper than at present.

Dr. Matthai—The point is that molasses are now being imported for the manufacture of spirits here assuming that in addition to that you are going to produce all the spirit that is now imported.

Mr. Burt—I see that comes to 3,400 tons only.

Dr. Matthai—That is not a very large amount?

Mr. Burt—No.

Dr. Matthai—Java apparently is getting a very good price for its molasses. Their best market is somewhere outside India, is it not?

Mr. Burt—I agree, India is not their biggest market.

Dr. Matthai—I found a calculation the other day that taking molasses simply on its sucrose content it fetches a better price than white sugar. As a matter of fact you will soon reach a point where it would be better to produce more molasses than white sugar.

Mr. Burt—The whole trend of modern sugar manufacture is to extract all the sugar from the molasses. Java manages 140,000 tons of molasses—sugar per annum.

Dr. Matthai—What is that supposed to be?

Mr. Burt—That is the so-called Java gum.

President—That we were told was manufactured by riyats in Java, that is our sugar.

Mr. Burt—That is not the same thing. That is muscovado sugar, Java produces 183,000 tons of muscovado sugar made by an open pan process. Java also produces 116,000 tons of molasses sugar which is the lowest grade sugar that is possible to recover from the molasses after all the high grade sugar possible has been recovered. It is very brown sugar, sometimes almost black and is quite different from muscovado sugar.

Dr. Matthai—This is what I read the other day. "At current prices the sucrose in molasses is being sold for \$3.04 to \$3.36 net per 100 kilo (220 lbs). At the same time head sugar is being sold in Java around \$3.60 per 100 kilo. Under these circumstances the sucrose in molasses can hardly be regarded as lost."

Mr. Burt—I think somebody also recently pointed out that Cuban sugar is cheaper than flour!

Dr. Matthai—If you can get \$3.36 on the sucrose in molasses, then is it economical to extract sugar? This is all limited by the factor whether there is sufficient demand for molasses.

Mr. Burt—I think some of the Indian factories take the view that it is not worth while pushing the sugar recovery to the last stage because they get a very good price for their molasses from the tobacco manufacturers.

Dr. Matthai—Out of their total production of 777,000 metric tons of molasses, 85 per cent is exported in one form or another and it is only about 1.84 per cent is used as fuel and fertiliser. The prospects of using molasses as fertilisers on the Java basis are very little.

Mr. Burt—I don't think there is anything in that myself.

President — But at any rate in estimating the costs of sugar manufactured at present in India, it would not be safe to take the present price at which they sell molasses

Mr. Burt — I would not take anything higher than the f o b price of Java molasses. In fact I would be prepared for a lower price than that, because more molasses are coming on to the eastern market

President — There will be very great competition between the factories upcountry if there was anything like one million tons of sugar manufactured in India

Mr. Burt — Yes

President — Now only 100,000 tons sugar are made in India and so it is easy to get rid of molasses

Mr. Burt — I think that is a sort of thing which will settle itself gradually. For instance you might substitute spirit made from molasses for mohwa spirit. At a certain price it would pay better to make ordinary potable spirit from molasses instead of from mohwa

President — But it would not be safe to take anything higher than the present Java's export price

Mr. Burt — No

**(2) Oral Evidence of Mr. B. C. BURT recorded at New Delhi on
Friday, the 14th November, 1930**

President—We want to start this afternoon by attempting to investigate the cost of production in Java so far as the figures which we have indicate. We might I think start by taking the c i f price and then see how far the available figures would justify us in considering that was the rock bottom price at which the Java sugar could be landed at Calcutta. That is the best way of proceeding I think?

Mr. Burt—Yes.

President—At present the market price in Calcutta is about Rs 8 5 0 or Rs 8 6 0.

Mr. Burt—The latest figure I have seen is Rs 8 4 0.

President—Let us take Rs 8 4 0. From that we have to deduct the duty of Rs 4-0-0. Is that correct?

Mr. Burt—Yes.

Dr. Matthai—Let us take the exact figure Rs 1 6 8.

Mr. Burt—The difference comes to Rs 3-13 4.

President—From that we have to deduct landing charges and the commission of the agent.

Dr. Matthai—I suppose there might be a little difference between the landing and clearing charges in Bombay and Calcutta?

Mr. Burt—Yes, but I should not think it would be a very substantial difference.

President—As far as I remember it is about 3 annas.

Dr. Matthai—Mr. Hancock's charges are 8 annas 7 pies per cwt.

Mr. Burt—For Java white sugar November-December shipments the c i f price is 7s 9d in Calcutta. That will be very close to Rs 3-13 a maund.

President—The importers have to meet the following expenses—

	A	P
Wharfage	1	6
Terminal tax	0	3
Allowance on defective goods (cut, torn, burst bags) about 10 per cent at Rs 2 0 per cwt	0	3
Weighing charge	0	2
Brokerage $\frac{1}{2}$ per cent	0	3
Charity	0	3
Miscellaneous	0	2
Importer's commission 1 per cent	0	10
	<hr/>	
TOTAL,	3	7
	<hr/>	

The total is 8 annas 7 pies.

Mr. Burt—Is that per maund?

President—No, it is per cwt.

Mr. Burt—That would leave about Rs 3 10-7 per maund as the c i f price.

President—Now let us take the figure which is given on page 10 of the League of Nations' Report.

Dr. Matthai —Before that we have to take into account the freight of 4 annas 6 pies per cwt

President —That is about 3 annas 4 pies per maund for freight. If we take this 3 annas 4 pies off the f.o.b. price comes to Rs. 373 per maund

Mr. Burt —Yes

President —If we take the cost of a white sugar factory in Java given by Dr. H. C. Pinxten Geerlings on page 10 of the League of Nations' Report, it is 1287 gulden per 100 kg. or 234 cents per pound. That agrees very closely with the average figure given for 1926, viz., 247 cents. So, we might take 234 cents

Mr. Burt —I agree

President —In 1926 and 1929 the average results for Java factories (178) were as follows. These figures are given by you

	1926	1929
Cane area (acres)	414,098	486,799
Harvested (tons)	18,083,145	24,110,899
Cane yield per acre (tons)	42.08	49.59
Sugar per acre (lbs.)	9,782	13,205
Sugar recovery per 100 cane	10.38	11.82

Mr. Burt —That is correct

President —The increase in the cane area was 9½ per cent and the increase in cane yield due to variety 18 per cent

Mr. Burt —Yes

President —The increase in sugar per acre was 35 per cent

Mr. Burt —Yes

President —Taking 489 guilders as the cost of the raw material per 100 kilos in 1926, you reduce it by 35 per cent

Mr. Burt —That gives the reduced cost of the raw material

Dr. Matthai —What is this 18 per cent?

President —That represents the increase in the yield due to the new varieties, 35 per cent allows for both the increase in the yield and increase in sucrose content

Mr. Burt —Yes, the latter allows for everything except the cheaper factory working which is a separate point. As regards the cost of the raw material per 100 kilos of sugar I think 100/135 of the 1926 figure should give a fair estimate for 1929

Dr. Matthai —That is to say, the sugar yield per acre, taking that at 100 in 1926, would be 135 in 1929

Mr. Burt —Yes

President —Where did you get these figures from?

Mr. Burt —These are figures published in the International Sugar Journal

Dr. Matthai —I have figures which I cannot reconcile with that. Have you seen the latest Sugar Cable Service circular? These give figures per hectare. (Handed the Circular to the witness)

Mr. Burt —I should explain one point about this. This return is for the season up to a certain date. For instance if you take 1928 you will find that they give the yield per 100 as 11.3 whereas the figure for the whole season was 11.45. For 1929 is quoted 11.93 whereas the figure for the whole season was 11.82. This is only a progress report

Dr. Matthai —There is a figure in the League of Nations Committee's report. There the output of sugar per hectare is given as 133 quintals. That applies only to one factory?

Mr. Burt —Yes.

Dr. Matthai —Will you look at the next page? Does the same criticism apply to that also?

Mr. Burt —This is only a progress statement. This is the result which the factory reported up to 30th November. I have here the final figures up to 1929. I have converted them into tons and grouped them according to tons.

Dr. Matthai —When you speak of 1929 do you refer to 1928-29?

Mr. Burt —1929 refers to the crop that was completed in 1929, that was mainly crushed in 1929. The current crop is the 1930 crop and we have not yet received complete figures for the 1930 crop.

Dr. Matthai —Does the current oil price on which we are now basing our calculations correspond to the sugar yield per acre in 1930?

Mr. Burt —We don't know that yet.

President —The present prices are based on the present crop?

Mr. Burt —Probably they are based on what the sellers can get, not based on the crop at all.

President —What is the price at which they are selling sugar?

Mr. Burt —White sugar has been sold as low as 8 florins per quintal. That as a matter of fact comes to a considerably lower figure than any we have mentioned. 8.25 per quintal corresponds to Rs. 4.9 per cwt., 8½ per quintal to Rs. 4.12, so 8 will correspond to about Rs. 4.6 per cwt.

Dr. Matthai —Roughly Rs. 3 per maund? Talking this present calculation, you get roughly Rs. 2 a cwt for raw material?

Mr. Burt —Yes.

President —On these other details of costs given in the League of Nations Report, the following are susceptible of reduction owing to changes in the last four years, viz., packing—the price of gunny has gone down very considerably—this corresponds roughly to 7 annas a cwt that might be reduced by about 2 annas to 5 annas nearly.

Mr. Burt —That would be reasonable.

President —Then the other item is the carriage of sugar 1.50, that is exceptionally heavy and must either include sea freight or there must be special reasons in the case of this factory, because in the report of the West Indies Sugar Commission there is a note which gives the average cost from factory to port as 4½d.

Mr. Burt —I think that is substantially correct.

President —So we may take packing as 5 annas and cartage of sugar at, say, 4 annas?

Mr. Burt —I think that would be reasonable.

President —That would give, taking Rs. 2 as the cost of raw material, Rs. 5-10 less credit for molasses. I have taken molasses at Rs. 1.4.

Mr. Burt —That seems to be quite reasonable.

President —Have you any information as to at what rate molasses comes into India at present?

Mr. Burt —I don't think I have.

President —We asked the Collector of Customs to give us figures but we have not yet received them.

Mr. Burt —He should be able to give you prices from invoices.

President—At any rate for the time being taking Rs 14 as the rate for molasses—that would give a credit of 5 annas a cwt—that would bring out the cost at about Rs 56 per cwt f o b Java

Mr Burt—It would be Rs 55 if you allow 15 per cent reduction in the cost of manufacture, owing to the fact that they have to crush less cane per ton of sugar. Apart from the fact of higher sucrose content which we have already allowed for there is the cheaper working owing to improved cane

President—We will take Rs 14, that would give us Rs 56 per cwt which is Rs 3148 per maund

Mr Burt—That is right

President—The only alteration in that calculation may be on account of any variation in the price of molasses

Mr Burt—Yes

President—That includes a charge for depreciation of 11 annas a cwt

Dr Matthai—To what figure did you apply this 35 per cent?

Mr Burt—489

Dr Matthai—Does that affect the cost of manufacture at all?

Mr Burt—I have taken that separately. Why I take it is this. The increase in the yield of sugar per acre represents the full reduction in the cost of raw material but it does not include the reduction in the cost of manufacture due to the fact that you handle less cane per ton of sugar, so I have taken these two entries separately. Of course the improvement in the raw material is the big one

Dr Matthai—What adjustment are you going to make in the cost of manufacture?

Mr Burt—Taking the figure of 71 quoted in the report and deducting from that 11 which is roughly 15 per cent

President—You are reducing the cost of manufacture translated into annas as from 64 to 54?

Mr Burt—Yes, one anna per cwt reduction

Dr Matthai—That is simply due to more sugar being made?

Mr Burt—Yes. I am not assuming any further improvement in factory management

Dr Matthai—Simply as a result of a larger amount of sugar resulting from the same amount of cane?

Mr Burt—That is it

Dr Matthai—Therefore to some extent your standing charges may be reduced?

Mr Burt—No. It is on the actual manufacturing cost. Overhead charges and so on are specified separately

Dr Matthai—“Overhead charges, rates and taxes” that probably refers to the standing overhead charges but I am thinking of the standing items in the works costs

Mr Burt—That is what I am deducting in this 15 per cent from the cost of labour employed in the factory, ordinary factory expenditure, lubricants and so on

President—That would give us roughly Rs 314-8 per maund and these items include the item of depreciation which amounts to about 11 annas a cwt

Mr Burt—Yes

President—Have you any information as to the position of the factories? We were given to understand that the majority of factories in Java have been able to write off depreciation to a certain extent and have got such large reserves that it would be quite possible for them to do without any allotments for depreciation for a number of years

Mr Burt —I should think that is quite true. As far as one can tell they are all in a very strong position.

President —On the supposition that Java is prepared to dump sugar into India over a period of years, what portion do you think it would be reasonable to take as depreciation? If possible, they might try to get a little profit but they might do without depreciation.

Mr Burt —I think there is little doubt that their depreciation allotments could be cut down by half and their upkeep and repairs could be considerably reduced. I believe that when they were getting a high price they kept their factories perfectly equipped, upkeep and repairs included replacements and the factories were in every way perfectly maintained, so that they have a very big margin for cutting down.

President —Would it be reasonable to take 5½ annas?

Mr Burt —I think it would be reasonable.

President —That would give us Rs 389 per maund f o b Java.

Mr Burt —Yes.

President —Add to that, say, 3 annas freight to Calcutta, that would give us Rs 3119 a maund. How does that compare with the figure you worked out as to the present o i f price?

Mr Burt —The present price at which sugar has been sold in Java is 8 florins per 100 kilos.

President —What figure did we work out?

Mr Burt —Rs 370 f o b Java.

President —That is very close.

Mr Burt —Actual business has been done in Java at 8 florins per quintal which is only Rs 460 per cwt.

President —Say Rs 33 per maund.

Mr Burt —That is right.

President —The quotations have gone up a little, haven't they?

Mr Burt —Yes.

President —Let us take Rs 336. Then we have to add freight to India on that of 3 annas, that is Rs 366.

Mr Burt —Yes.

President —That is very close to your quotation and not really far from the figure we have arrived at, viz, Rs 389.

Mr Burt —Yes. I think there is a difference of 5 annas there between this and our previous figure Rs 389 f o b. I think there is little doubt that Java could make sugar at a profit at Rs 389.

President —We have a letter from the Sugar Technologists Association, Allahabad. It says—

“ In the report of the West Indian Sugar Commission just to hand there appears a misleading inaccuracy to which I would call attention. The table of cost of production published by Lt-Col Ivan Dawson shows Java with a production cost of 9s 3d per cwt whereas this figure is less than 8s per cwt, thus placing Java on top as the country with the lowest cost of production and not Cuba ”

It says that this letter has been written by Dr Francis Maxwell from Paseroean, Java, on 19th August 1930. He gives the figures at 8 shillings a cwt. It comes to Rs 3118 a maund.

Mr Burt —Yes. We get back to our own figure of Rs 3143 before we cut down depreciation.

President —That was f o b Java.

Mr Burt —That is so.

President—The West Indian Commission took their information from Lt Col Ivan Dryson's statement

Mr Burt—They also quote the League of Nations figures, I think Dr Maxwell is right

Dr Matthai—This figure that the League of Nations Report gives is the cost of production of a factory selected at random

Mr Burt—That is in a note given by Pimpen Gecikigs' to the League of Nations Committee He is quoting from two factories selected at random

Dr Matthai—One is for white sugar and another for brown sugar?

Mr Burt—Yes

Dr Matthai—For the purposes of our calculation we are taking that as typical

Mr Burt—I think that is justified in the light of what the President said

President—The average is 2.17 At the same time the cost of the average factory need not necessarily determine the price at which sugar is going to be sold in times of stress

Mr Burt—No I think if you look at the table which you showed me just now, you will find something like 27 factories out of 170, which are very much out of the running in regard to sugar recovery *i.e.*, they are much below the general Java standard In 1929 there were 32 factories producing not more than 5.2 tons, whereas 103 factories were producing over 5.2 tons and 53 factories were producing over 6 Those 32 factories that were below the 5.2 ton limit may have to put up with very small profits or even a loss when the Java "single seller" is faced with keen competition

Dr Matthai—How would you set about getting the true cost of production in Java?

Mr Burt—I am afraid it is impossible now, because Java probably very little about their operating costs There was a time when this figure could have been worked out Any calculation we make on the average is likely to be too high because of the 32 relatively inefficient factories

President—It looks as though even under present conditions Java could certainly land sugar at Calcutta at Rs 3-12-0 It might if pushed to it adopt a deliberate policy of dumping and land at Rs 3-8-0

Dr Matthai—It would go down to the extent of their reserves If it comes actually to a rate war there is no limit that you can fix

Mr Burt—Java costs of production are certainly not much above Cuba Recently Cuba has been selling at no profit and probably at a loss If an actual rate war started I don't see anything to prevent Java also selling sugar at one cent a lb

President—Apart from the rate war we know that for several months rubber companies have been selling their rubber at half their cost of production

Mr Burt—Quite That is the difficulty of the position At the present figure of Rs 3-11-0 a maund, I have no doubt that Java could put sugar at Calcutta at a profit

Dr Matthai—That is to say if they were not dumping, but selling at a price which is fairly economical, then the minimum price is likely to be somewhere of that order If it came to a rate war and deliberate dumping there is no limit which you can fix

Mr Burt—What has happened in Cuba is this The price was 1½ cents a lb for a long time and then it went down to one cent and then it recovered to 1.3 cents These are the lowest prices that we have on record

Dr Matthai—How much does that work out to?

Mr Burt—1.3 cents = Rs 3 per maund

President—Perhaps this unknown possibility of dumping might be provided against by allowing factories a slightly higher rate of profit so as to be able to constitute a reserve fund from which to meet any possible dumping?

Mr. Burt—Something of that kind should be done.

President—Supposing we took Rs 8-12 0 as the reasonable price at which on the present figures Java might be expected to land sugar at Calcutta and at the same time allowed in our costs an extra Rs 8 2 maund as a reserve fund which if Java did not dump might be utilised in the country for strengthening the reserves of the country and for doing propaganda?

Mr. Burt—That is one satisfactory way of meeting dumping. The other alternative would be to put what you might call a crisis protective duty to cover a period of a few years only which could be taken off when the present crisis has passed. Not only is there enormous stock in Cuba but the Cuban cane area is being maintained and the factories are still preparing for a large campaign next year. There is nothing to indicate any reduction in the surplus production of sugar in the world.

Dr. Matthan—What precisely is the suggestion that you are making? Supposing we declare the industry protected for a period of 15 years, for argument's sake, and for that period we fix a particular rate of duty as the basic duty, that continues for the whole period and for a short temporary period, say, 5 or 6 years you have what you call a crisis duty.

Mr. Burt—Before you come to a crisis duty, if I may interrupt, I would first of all have your basic duty for 15 years and then have a development duty so as to ensure that development which is very important. Then if there were no crisis, we would leave it at that. But as we know that there is a crisis, put on a third duty for a period of say, 3 years only, in the first instance, or a duty which may be taken off before the seven year period.

President—Why not have one duty for 7 years and make that duty higher and allow the factories to build up a reserve and meet any kind of emergency. You don't want an enquiry to be conducted every two years.

Mr. Burt—Your proposal would on the whole be the best way of meeting the difficulty.

Dr. Matthan—In fixing the duty which is appropriate to the temporary period on what basis do you estimate the duty? You have got to take the difference between a fair price for the Indian industry and a c i f price.

Mr. Burt—Yes.

Dr. Matthan—Now your suggestion is that the temporary duty should be the difference between whatever price we now estimate as the fair price for the Indian industry and a c i f price corresponding to 1½ cents a lb.

Mr. Burt—Yes.

Dr. Matthan—On the same effect to be arrived at by taking the current c i f price and the fair selling price increased by an amount which represents the reserve that the industry might require in case there was dumping.

Mr. Burt—I should personally prefer to do it the other way after you have determined the fair selling price. Assuming that we know that Java can sell sugar with profit at a figure X but that there is a chance of Java sugar being dumped at a lower figure Y, the amount of additional protection required for the period would be the difference between these two figures, i.e., X—Y.

Dr. Matthan—How would you fix the basic duty? I understand during the first seven years we ought to provide a price for sugar which would enable the industry to push forward as rapidly as they can. When that period has passed, then it might be possible to give the industry a slightly lower duty?

Mr. Burt—Yes.

Dr. Matthan—What I am trying to get at is this. In fixing your temporary duty you have to take a c i f price and a fair selling price. In fixing the basic duty also you have to take a c i f price and a fair price. Are

the *c i f* price and the fair price different in both cases according to your suggestion?

Mr. Burt—As far as the temporary crisis is concerned it is the *c i f* price which will vary. That is why I divided my thoughts into three separate duties although one would not necessarily impose them in that way. What we want to secure is that there should be no dumping by Java which would make protection ineffective. The immediate danger would be the *c i f* price falling below the price on which the calculation duty is based. Having got over that difficulty the fair selling price which you calculate now will be the price which the factories require in order that the industry may expand. The difference between that and the present *c i f* prices which are not dumping prices would give you your duty for seven years. The protective duty for the second part of the period might take into account the improvement which will be effected in the industry by the reduction in the cost of the raw material. In the second part of the protective period we look forward to definite improvements.

President—With a smaller price for the cane?

Mr. Burt—Yes.

Dr. Matthai—Take the *c i f* price for that too.

Mr. Burt—In calculating the basic duty I would take the present *c i f* price and reduced fair selling price. The question will have to be examined at the end of 7 years. I would put it this way that one might guarantee a minimum duty for 15 years and a higher duty for 7 years.

Dr. Matthai—A higher duty in the meantime subject to an enquiry at the end of seven years?

Mr. Burt—Yes. It doesn't follow that the whole of the higher duty could be wiped out at the end of that period.

President—No. As regards the *c i f* price we shall take in calculating the basic duty, do you think that the price of Rs 3-12-0 would continue or do you think that it would go up after 7 years? Is there any indication of a higher price?

Mr. Burt—I don't think so.

President—Unless there is any threat of deliberate restriction of output there is no reason why the price should go up?

Mr. Burt—I don't see any reason why one should get any very large increase in the price of sugar.

President—Without restriction it is impossible to devise any scheme. The price might be pushed up to anything if the restriction is introduced to a sufficient degree.

Mr. Burt—If any restriction takes place it is likely to be of the mildest possible nature because of the enormous importance which the European countries attach to the beet crop. The cost of production of beet sugar is twice the cost of production of cane sugar but Europe still maintains its beet crop because of its enormous economic importance.

President—You mean that Java would not take the risk of reducing the area because beet might take its place?

Mr. Burt—Exactly. I don't think any restriction will operate longer than is necessary to clear up the present acute depression due to the present enormous stock.

President—Would it be reasonable to take Rs 3-14-0 or Rs 3-12-0 as the basic *c i f* price for 15 years?

Dr. Matthai—That we would be justified in doing, because we consider somewhere about Rs 3-12-0 is the economical price.

Mr. Burt—I don't think there is any chance of Java's cost of production going up. On the contrary, as I said before, I don't think we are going to have another surprise in the introduction of new canes for another 5 years. The enormous improvement which took place from 1926 to 1930 after they had

reached the highest standard in the world leads one to suppose that they have not reached the limit

Dr. Matthan—For our purpose we base the basic duty on the present c.i.f. price and what we consider would be a reasonable sale price. Supposing at the end of 7 years when we are enquiring into this industry it is found that while the Indian costs have gone down there has been a reduction also in the costs of Java then of course that is a factor that will have to be taken into account in determining whether the temporary duty would continue.

Mr. Burt—It is not possible to do any more than to take the present c.i.f. as your basis for your 15 years calculation.

President—We have worked out somewhere in the neighbourhood of Rs. 4 as the basic price. Now for the first 8 years if we took Rs. 3.80 as the basic c.i.f. price, would we be absolutely safe?

Mr. Burt—I have shown the possibility of Rs. 3.20 a maund f.o.b. plus 8 annas. That makes it Rs. 3.50.

President—With a possibility of your paying the shipping charges?

Mr. Burt—It comes to Rs. 3.80.

President—Would we be very far wrong if we took Rs. 3.80 as the basic price for the first seven years and Rs. 4 for the rest of the time?

Mr. Burt—I don't think so. It is largely guess work. On such information as we have it would I think be fairly right.

President—At the same time since everything is uncertain, in these matters, it is better to allow something in order to enable factories to build up a reserve fund to meet any possible contingencies?

Mr. Burt—That would be taken into account in fixing the fair selling price.

President—That is to say, we would allow so much to be taken to the reserve fund to meet the possibility of dumping, the necessity of propaganda, the possible distribution of free sets when there has been a period of disease and so on?

Mr. Burt—Yes. I think that a margin should be kept for what one might call contingencies and development work.

President—What do you think about the fair price for cane? We have to look at it first of all from the point of view of the producer and see what would be fair to him and then from the point of view of the factory to see at what price the factory could expect to get cane in competition with the gum manufacturer.

Mr. Burt—Yes.

President—In the Punjab we are told that 5 annas a maund is the cost of production of cane for producing the Coimbatore variety and in the United Provinces Mr. Clarke gives us $4\frac{1}{2}$ to $4\frac{1}{4}$ annas, but I am not quite clear from the representation—we shall find out when we go there—whether that is for improved cane or for the ordinary variety.

Mr. Burt—I think that 4 annas a maund is for the improved cane on the field. It is as low a figure as you can take.

President—From the cultivator's point of view that does not allow him—so far as I can see from the figures we have been given—anything in the way of interest on the capital he has expended during the year. He has probably to borrow during the beginning of the year to feed himself and his cattle. It costs him Rs. 120. He might have an expenditure of Rs. 12 or Rs. 13 in the course of the year in the way of interest to his moneylender.

Mr. Burt—I think that every sugarcane grower has to borrow a certain amount.

President—In the cost of production must we make some allowance?

Mr. Burt—Yes for his borrowing.

President—Rs 12 would be about 200 annas. On an output of 400 maunds per acre it would be somewhere near half an anna. That would be a generous allowance, would it not?

Mr. Burt—That would be a reasonable allowance.

President—Now we have to allow something for bad harvests. We have just come from Sonapat and we have seen whole crops destroyed by disease.

Mr. Burt—That may happen once in five years.

President—That requires an allowance of half an anna. Would that be reasonable?

Mr. Burt—Yes. I think that you have to calculate at present on $5\frac{1}{2}$ annas. Taking generally the tract from Bihar to the Punjab $5\frac{1}{2}$ annas is the cheapest at which you can expect the cultivator to deliver the cane at the factory's weighing scale.

President—If you are going to have the cane delivered at the factory the delivery charges are fairly high.

Mr. Burt—I believe it is $1\frac{1}{2}$ annas.

President—That is what we gather. That would bring the figure up to 7 annas.

Mr. Burt—Yes, 7 annas at the factory.

President—Then, you have to allow something to induce him to sell to the factory rather than to the gur manufacturer?

Mr. Burt—Yes. I think that if you take the cost of cane at 8 annas a maund to begin with, then I would say that in seven years' time with improved methods of cultivation and improved canes one ought to be able to pull that down to six annas.

President—That would I suppose enable him to compete with gur? It is rather difficult to ascertain exactly what the cultivator who makes the cane into gur gets, because it is so difficult to ascertain the price of gur.

Mr. Burt—Gur has no fixed price, and the cultivator's actual payments out in cash vary enormously. The amount of hired labour varies enormously from village to village and it is quite impossible to get anything like a representative figure for the cost of producing gur without a very special enquiry. I think it is quite correct to say that if we have to offer a rate which will encourage the cultivator to deliver his cane at the factory, a price of 8 annas a maund would be required. For instance in Rohilkhand though the *khandari* sugar is not fetching a good price I am told that they have difficulty in getting improved canes at less than 8 annas a maund. One has to consider both points of view, the cultivator has to get a price which will encourage at least the maintenance of the present sugarcane area and the delivery of the cane to the factory, on the other hand if the factories are to get full supplies of cane, their calculations should be based on a price of 8 annas a maund delivered at the factory.

President—As a matter of fact if you take the price of gur at about Rs 580 which is about the price prevailing here, and take 4 annas for commission, it leaves you Rs 540. The actual out of pocket expenses of the cultivator might amount to as much as a rupee.

Mr. Burt—Yes.

President—That leaves you Rs 440, or 68 annas a maund.

Mr. Burt—Yes.

President—If you take the output of gur as one eleventh, that gives you just over 6 annas a maund of cane.

Mr. Burt—Yes for the cultivation of cane.

President—We have calculated that $5\frac{1}{2}$ annas is the fair price excluding delivery at the factory and we have allowed him an anna over and above that for profit. That would be just a little bit above the gur price, so that from both points of view it is not an unreasonable figure to fix.

Mr Burt—No To start with, one has to base the costs on that figure

Dr Matthai—You were suggesting a little while ago that at the end of seven years the cost might come down from 8 annas to 6 annas Suppose at the end of 7 years your sugarcane cost comes down to 6 annas but the prices of sugar remain more or less at the level which we contemplate under the protective scheme Are you suggesting that the benefit of the whole of the two annas should go to the factory

Mr Burt—I think that the factories will be able to get their raw material cheaper at the end of about 7 or 8 years

Dr Matthai—That is true But I am trying to think what the problem would be at the end of 7 years I am trying to see how you would estimate your fair selling price at the end of 7 years Are you going to suggest that the sugarcane cost per maund of sugar should be reduced to the extent of 2 annas per maund of sugarcane?

Mr Burt—I think we can hope for that

Dr Matthai—If the price of sugar remains the same and there is a reduction in the cost of sugarcane, is the sugarcane grower to share in the benefit of it?

Mr Burt—I think that at the end of seven years if the cost of the raw material comes down by 25 per cent, then a reduction in the protective duty would be justified If your idea is that eventually the industry should continue with the minimum possible protection, it needs special protection to begin with and a smaller scale of protection afterwards I am trying to arrive at what would be a reasonable estimate for the reduction in the cost of the raw material to which we can look forward in seven years' time

Dr Matthai—The problem that I am trying to raise is a practical one in this way It is perfectly legitimate for us to take in estimating our present fair selling price a price of 8 annas per maund of cane which would give the grower a fair price and would ensure to the factory a sufficient supply of cane

Mr Burt—Yes

Dr Matthai—But we have to put this proposition to the Assembly and they might take the line that if there is any improvement in the position, the price paid for cane to the grower must be a price which varies in accordance with any upward variations in the price

Mr Burt—You mean of sugar?

Dr Matthai—Yes

Mr Burt—That of course is almost impossible to legislate for unless one makes a sliding scale for cane on the basis of sugar by legislation But I think we can assume that the factories in order to get a full supply of cane will pay the riyat a price which the riyat finds profitable The factory will naturally always try to reduce the price of cane

Dr Matthai—Supposing a man tries to grow improved varieties, as a result of that his cost of cultivation per maund of cane goes down Under your scheme, the whole benefit of that improvement is taken out of his hands

Mr Burt—No, it will all go to the cultivator

Dr Matthai—At present it does Supposing at the end of 7 years you are going to base your fair selling price on the reduced cost of cane, it means that the riyat supplies his cane to the factory at a price which is less by 2 annas

President—Is that quite correct? It seemed to me that your suggestion was that at the end of seven years it should be a subject for enquiry whether we should be in a position to reduce the cost of cane by about 2 annas That would be the maximum That is your idea I think?

Mr Burt—Yes Let me explain it in another way With improved methods of cultivation and improved varieties, the grower's cost of production per maund would come down steadily and there would be competition

to sell cane to the factories amongst the growers. The factories in actual practice would probably reduce the price of their cane towards the end of the seven year period because of the keen competition to sell their cane. You will have competition amongst the rajats to sell their cane to the factory if their cost of production is less, so that it is not likely that one will be confronted with the alternative of maintaining the duty or giving the rajat a sudden drop of 2 annas. I think that the price of cane will come down gradually.

Dr. Matthai—The fair selling price for the whole period would be based on 8 annas or for the present it would be based on 8 annas? Which is it?

Mr. Burt—The fair selling price for the first seven years would be based on 8 annas.

Dr. Matthai—The fair selling price for the whole period is based on 8 annas for cane and one of the objects of the enquiry at the end of seven years would be to consider whether there has been any change not merely in the c i f price but also in the fair selling price. That I think was your suggestion.

Mr. Burt—I agree with you.

Dr. Matthai—In considering whether there has been any change in the fair selling price, the sugarcane cost of sugar would of course be a most important factor?

Mr. Burt—It would.

Dr. Matthai—Are you considering that the Tariff Board would be justified at that stage in reopening the question of price to be paid to the sugarcane grower? What would be the effect of that on the grower and his willingness to try improved varieties?

Mr. Burt—That is the most important thing. I hope at that time we shall be able to know more about the cost of production of cane. At the end of 7 years I think the Tariff Board will have to consider the cost of production of cane.

Dr. Matthai—What do you think is the best course for us to adopt in making our proposals to the Assembly? Are we to say that the object of this enquiry at the end of 7 years is an enquiry into the c i f price? Or would the primary question then be the cost of sugarcane?

Mr. Burt—I think that that will be the primary question.

President—The primary question will be whether the price of cane has fallen?

Mr. Burt—Yes, whether the cost of production of cane has been reduced. The third question which will have to come up is whether in the meantime the quality of cane has improved, so that per maund of cane the factory can afford to pay a higher price than it pays for such canes as we have at present. I will put it this way. Good factories are now getting a recovery of 9½ per cent. I think I expressed the opinion in Calcutta that one would not get a very big increase above 9½ per cent except with an improvement in the quality of the cane. Now if the producer puts up the quality of his cane as well as the yield of cane per acre, he is reducing the cost of production of sugar per acre. At present he is producing 600 maunds per acre. With the improved cane if he produces 800 maunds and if, in place of the present recovery of 9½ per cent, it is possible to get 10½ per cent, you need not reduce the price to the rajat by a full 25 per cent. It will be reduced at first to the extent of 25 per cent and then something will be added on for the extra sugar that is got.

Dr. Matthai—Look at it the other way. Supposing during the period of protection the prices of sugar in India reach a level higher than that represented by our protective duty, supposing there is a revival of the sugar trade as a whole and prices go up and our basic duty is a little too high for ensuring a price of Rs. 10 at Calcutta, supposing that position is reached would you like the sugarcane grower to benefit by it?

Mr. Burt—Certainly the sugarcane grower will benefit by it. I take it that if the general price of sugar goes up, he would certainly benefit by it because the factories will be in a position to pay a higher price for the cane. I am assuming that the established factories will continue to pay on a sliding scale because it has been found that is the only way of ensuring supplies and new factories will probably follow suit. Past history seems to show that sugar prices can go very much higher than anything we contemplate at the moment without seriously reducing the consumption.

President—It will also be reasonable I suppose to take in the first seven years a rather higher factory cost than it would be later on. In other words we might expect the factories to make some reduction in the course of the next seven years in their manufacturing costs?

Mr. Burt—Certainly they should do that.

President—Generally speaking Indian factories are within 5 per cent of Java efficiency so that partly on account of decrease in price of cane and partly on account of increased efficiency, it might be reasonable to reduce the duty after seven years.

Mr. Burt—Yes. The general average for India is about $8\frac{1}{2}$ and the best are getting $9\frac{1}{2}$ to $9\frac{1}{4}$ per cent. We assume that in seven years all factories should reach $9\frac{1}{2}$ on an average.

President—In the meantime if we take $7\frac{1}{2}$ as the average so as to pay some consideration to the weaker brethren and encourage them to put up the efficiency of their factories, perhaps in seven years we might take $9\frac{1}{2}$ per cent.

Mr. Burt—I think that would be reasonable.

President—As a matter of fact the Belapur factory is getting 11 per cent but their sucrose content is very much higher than that of canes up here.

Mr. Burt—The rise from 6 per cent which the Indian Sugar Committee quoted to the present $8\frac{1}{2}$ is very largely due to improved cane. Improved canes are going ahead very fast. This year the total estimated area is something like 800,000 so that one factor which kept the factories from getting $9\frac{1}{2}$ per cent recovery is being rapidly removed.

Dr. Matthai—There is another point in connection with the previous question. Are you making a considered suggestion on behalf of the Imperial Council of Agricultural Research that at any enquiry which might take place at the end of seven years, both the c.i.f. and fair selling prices should come up for consideration?

Mr. Burt—The Research Council has not considered this point. This must be taken purely as my personal opinion.

Dr. Matthai—Is it your personal opinion that it is in the best interests of the industry and of the parties concerned in the industry that at any enquiry which is made at the end of seven years both these figures should come up for consideration? The point I am trying to raise at this stage is this. Look at it from the point of view of the sense of security for the industry. Supposing we said that for the next 15 years we considered that a price of, say, Rs. 10 a maund in Calcutta was what the sugar industry in India was going to get. If you are going to raise not merely the question of the c.i.f. price but also the fair selling price after seven years, the industry might feel less security.

Mr. Burt—So long as they know what minimum price they can expect for 15 years it will not do any harm.

Dr. Matthai—There is no minimum.

Mr. Burt—You can say that over the 15 year period you will take the protective duty as much, for seven years you will take the protective duty at so much which will be something higher because the first seven years is to be a period of development.

President—Let us suppose the basic duty is Rs 6 per cwt. We have to increase that, to cover the cost of cane in the early years at what price shall we take cane?

Mr. Burt—Make it 8 annas

President—For the first seven years take it 8 annas a maund, that means the basic duty has got to be increased by Rs 1 6 0. You now add 8 annas for dumping and 4 annas for lack of efficiency as compared with the second period. That gives you Rs 2-2 0 per maund, you will probably have to make some subtraction from that probably in the first seven years you would get a higher price for molasses than you would in the second period. Some allowance might be made for this and also for freight advantage in the early years. Possibly Rs 1-6 per maund or Rs 2 per cwt might be the additional duty required.

Mr. Burt—There is another point, we want to be certain, when the question of the re-examination at the end of seven years comes up, that the grower is going to get a fair price for his cane during the second period. It may be that our calculations are wrong and we may have to pay much more during the second period than we estimate. If the cost of production does not go down then we shall have to base our second seven years' fair selling price on a higher figure than you envisage.

President—Probably you may have to continue the duty?

Mr. Burt—It may not be reduced or it might even have to be raised.

Dr. Matthan—You don't think that it is undesirable that at this enquiry at the end of seven years the whole position of the sugar industry should come up again for review and not merely the import price?

Mr. Burt—Against that one would be open to the charge that an unnecessarily high duty was being imposed on the consumer.

Dr. Matthan—After all he is going to pay Rs 10, there is no alteration as far as that is concerned. He is going to pay no more for the next 15 years than what he has paid for the past ten years.

Mr. Burt—That is true.

Dr. Matthan—If the sense of security that that kind of arrangement would give is going to help the industry is it not worth while giving it?

Mr. Burt—Supposing there was going to be a very material reduction in the protective duty at the end of 15 years if you provide full protection for the whole of the 15 years is there not the risk of the establishment of factories in un-economic areas?

Dr. Matthan—That is a matter which might be looked into at the end of 15 years.

Mr. Burt—I am very much in favour of giving the industry every sense of security but I am equally anxious that the protection during the early part of the period shall be fully adequate. I should not like to see the duty during the early part made too small because it was a flat rate for 15 years.

Dr. Matthan—There I agree with you but I don't want a prolonged enquiry like this to take place during the 15 year protective period. The moment you raise the question of the fair selling price of the Indian industry practically the whole question will come up for re-consideration which I think is rather unsatisfactory from the point of view of the industry.

Mr. Burt—I am not sure that you can secure adequate protection to the grower in any other way, the question is only secondarily an industrial one but primarily agricultural.

Dr. Matthan—There are two aspects of this question, there is the aspect of the grower and there is the aspect of the industry. What I am suggesting is that from both points of view it is undesirable to have a complete enquiry at the end of seven years which is what you will be driven to if the question of the fair selling price also comes up for consideration.

Mr. Burt—A possible compromise, assuming that you can obtain sufficient data now is to definitely fix one duty for the first seven years and a slightly

lower duty for the second seven years and announce that you will make an enquiry into the c i f price at the end of seven years and leave it to the industry to come up for further protection. I certainly think that if any one is to ask that a high enough duty should be put on now fully to develop the industry, that duty will be rather too high for the second seven years.

President—You are afraid that if it is put on for the whole period it will appear so high a rate of duty that the industry might be deprived of any incitement to efficiency, if a fairly heavy duty is imposed for the first seven years a lower duty would be sufficient for the second period?

Mr. Burt—I do think there ought to be a definite incentive to improvement in all branches of the industry.

Dr. Matthan—But if he reduces his costs don't you think the resulting profit will be sufficient inducement?

Mr. Burt—It is better but we would like to have a positive measure of inducement.

President—We were told at Cawnpur that in Rohilkhand no gur was made at all practically, it was all sugar.

Mr. Burt—I believe that is substantially correct. Rohilkhand is essentially a sub-producing tract and sub is made into sugar, by a variety of ways now of course mainly by centrifugal.

President—If you remember, in the Imperial Council's written representation they made a great point about the relation of imported sugar prices to gur prices and have prepared graphs. So far as Rohilkhand is concerned it is unnecessary to trace any connection between gur and imported sugar and we can say straightaway that the price of imported sugar directly affects the whole of that division. If there is a still further reduction in the price of sugar or the higher revenue duty were reduced to, say, 15 per cent I suppose there will be considerable distress in that tract.

Mr. Burt—Yes, very serious. It would be a calamity to Rohilkhand which grows something like 350,000 acres of cane.

Dr. Matthan—In the letter you wrote to us you suggest that something like 250,000 tons is the total production of indigenous sugar in Rohilkhand and the adjoining districts. Have you had any further information?

Mr. Burt—It is not possible to get any further information except what we gave in our letter. It is not possible to get any actual statistics on the point. The total cane area including portions of some districts which are not in the Rohilkhand division is approximately 350,000 acres on the average.

President—Could you give us any information about Khan Bahadur Hadi's method of making sugar?

Mr. Burt—Originally Khan Bahadur Mohamed Hadi introduced the use of centrifugals in Rohilkhand and he should be given full credit for this. At the same time he tried to introduce an improved boiling plant which, however, did not catch on. He has recently brought out a modified boiling plant which I have seen and in my opinion the furnace and the arrangement of pans are better than that of the ordinary Rohilkhand "Bel". We had a partial examination of it by a chemist at Bhopal. Unfortunately we did not get all the cane we wanted but it showed that the process was worth examining further. We are arranging for a complete season's commercial test being carried on again next January to March.

Dr. Matthan—It would be done under the direction of your technologist?

Mr. Burt—Yes.

President—At present it has not proved a success as a commercial proposition?

Mr. Burt—We shall now try it as a commercial proposition. It will be a commercial test.

President—You think that in the agricultural interest of the country the acreage under cane should at any rate be maintained if not increased?

Mr. Burt —I think it is absolutely essential that the acreage under cane should be maintained. It is not merely a question of maintaining the production of sugar because cane in the sugarcane belt occupies a unique position. First of all it is really the only cash crop in the real sugarcane belt. Cotton does not do well there, there are signs that jute is being overproduced and there is no indication that jute can take the place of sugarcane. The tobacco area is already quite high. It is such a large part of the world's supply that there is no great room for expansion unless the internal demand increases very largely. All the cash crops, especially those which employ a good deal of labour seem to be excluded as substitutes for sugarcane. Then the second advantage of cane is that it employs the cultivator throughout the year and gives a considerable amount of employment to village menials and any landless labourers that may exist in particular tracts. It also assists cultivators with uneconomic holdings because they obtain employment during the period from the middle of December, which roughly marks the *Harif* harvest, to the beginning of March, which is the beginning of *rabi* harvest in northern India, sugarcane gives them a good deal of employment when they most need it. So from the point of view of employing rural labour it is an extraordinarily important crop and one wants to see the area maintained. Then cane encourages a more intensive system of agriculture. That is specially important in those tracts where the irrigation is done from tanks or from wells by any kind of lift. That type of cultivation requires a crop which gives a big gross output to make up for the cost of lifting water. When you grow sugarcane you can afford to spend money on water and manure because you are getting a big gross return for your labour. Then in Rohilkhand and in some other parts of the United Provinces cane growing is very important to the success of the many tube wells which have been put down. Something over 200 tube wells driven by oil engines have been put down in the United Provinces and the Director of Agriculture in his recent report stated that they would only really be successful where there was some form of intensive agriculture. Sugarcane is important as leading to a more intensive form of agriculture where your rural population is very dense. There is another point which I mentioned before. One gets higher yields of other crops when grown in rotation with sugarcane. That is not merely a question of the utilisation of manurial residues though that is important, but is due to the intensive stirring of the soil especially when sugarcane is grown by the trench method. In connection with the manurial question purchased manures are not necessarily the basis of this intensive form of agriculture. In Rohilkhand for example green manuring is extremely successful and that only means a temporary surrender of the income from the land, the man has got to cultivate the crop which he has got to plough into the soil. Then there is another advantage of sugarcane, viz. the fodder supply for the period from December to March throughout the cold weather when the ordinary fodder is steadily falling off, sugarcane crops keep your animals in better condition. Generally speaking you have a parallel for cane in the root crops in Europe. In large parts of Europe it is only possible to maintain a high standard of agriculture and to keep the people on the land by growing root crops—whether it be sugar beet or other root crops like mangolds. To a certain extent sugarcane takes the place of root crops in Indian agriculture. Finally there is the point that at the present moment the price of every agricultural commodity has gone down due to production being in excess of effective demand. All our export products are fetching a very low price. This is an opportunity of doing something for the cultivator if we can extend sugar production.

Dr. Matthai —The leading crops, jute, wheat and cotton, since their markets are exportable markets, we can't help.

Mr. Burt —Quite.

Dr. Matthai —You can on the other hand put a duty on sugar and control the home market.

Mr. Burt —Yes, and stop unnecessary imports.

President—Apart from the question of imports I think you will agree that if the Agricultural Department is successful in extending the cultivation of improved canes there is a real danger of a glut of *gur* on the market.

Mr. Burt—That of course would be temporary.

President—Supposing we do nothing and there are no white sugar factories and the improved canes are introduced there would be a glut of *gur* on the market to start with?

Mr. Burt—Yes.

President—The result would be a fall in the price and very great hardship to the cultivator in the first place and secondly a large reduction in acreage.

Mr. Burt—That would happen. Sugarcane cultivation in some tracts would probably be stopped altogether.

President—Is there any reason to believe that the introduction or the formation of a large number of sugar companies or sugar factories in northern India would indirectly assist the *gur* industry in southern India in this way? All the improved types of cane which have been produced at Coimbatore so far have been produced mainly with a view to their suitability to climatic conditions in northern India. They are not particularly suitable to either Bombay, Madras or Bengal. Now since they are more suited to northern India they have been introduced there on a far greater scale than elsewhere. Therefore the output in northern India especially in the United Provinces which contains half the acreage of cane in India is going to increase very largely.

Mr. Burt—Yes.

President—Therefore the United Provinces which already imports into Bombay is going to export to a very much larger extent and probably at a very reduced price.

Mr. Burt—That I think is quite probable. If nothing is done, the immediate result of introducing improved varieties is going to reduce the cane acre in India and of course places which will suffer after the first disturbance will be those where cane production is most expensive.

President—That is in Bombay and Madras and possibly Bengal.

Mr. Burt—Bombay certainly. Bengal seems to be doing quite well.

President—I make rather a point of this, because those are the provinces which might possibly complain about the introduction of a duty on white sugar on the ground that there are no or very few factories within their areas, therefore the agricultural labour in those Provinces would not benefit to any considerable extent and the other benefits, such as increase in the supply of fodder and so on of which we have been speaking, although they may accrue in the United Provinces and Punjab will not be shared by Madras and Bombay. Therefore if it is proved that by starting more white sugar factories an outlet will be provided for the surplus cane which would otherwise in the form of *gur* be dumped possibly in Madras and certainly in Bombay and thereby seriously affect the area under cane in those provinces a duty on white sugar will be of great advantage even to the *gur* producing provinces.

Mr. Burt—I agree, I think we also mentioned early in our note that a protective duty on sugar would benefit what I may call the minor sugarcane areas.

President—Indirectly?

Mr. Burt—Yes, because if the price of sugar is raised in Madras there will be a certain tendency to eat more *gur* and less sugar. At any rate the substitution of sugar for *gur* will probably be checked.

President—Do you attribute this decline in the price of *gur* in the last three years to the increased output as the result of the introduction of improved canes?

Mr. Burt—I think that it is much more due to the fall in the price of sugar.

President—In some parts of the United Provinces they are planting as much as 70 per cent of the area under improved canes.

Mr. Burt—It is only in the last two years that the figures have been so big. This year the total area under improved canes of all kinds in India is 815,000 acres of which 514,000 acres are in the United Provinces. That is practically doubling last year's figures. The year before they were well below that again, so that the effects of the large areas under improved canes have not yet been fully felt.

President—If in the next few years the increase is maintained at this rate, there must be a big fall in the gum prices.

Mr. Burt—I should not be at all surprised to see it next February when the present large crop is crushed.

President—You consider that the protection of white sugar is essential if we are to avoid something of a crisis in sugarcane cultivation in India?

Mr. Burt—Definitely, and protection is required very early.

Mr. Rahimtoola—What do you think would be the approximate period that would be required for the sugar industry to stand on its own legs without protection?

Mr. Burt—Under present conditions hardly any country can maintain its sugar industry without protection but India could eventually do so if there were an end of subsidies in other countries. I do think in a period of 15 years India should be able to produce sugar at prices not far removed from those say in the West Indies or Formosa—which are well below the cost of production of beet sugar in Europe.

Mr. Rahimtoola—You have told us just now that the dumping price at the lowest would be Rs 3-2-0 which is now the selling price of Cuba?

Mr. Burt—I hesitate to prophesy. That is the nearest I can get.

President—Is that f o b Java?

Mr. Burt—Yes.

MESSRS BEGG SUTHERLAND AND COMPANY.

(1) Oral Evidence of Messrs A. B. SHAKESPEAR, NOEL DEERR and C. ATKINS, recorded at Pusa on Thursday, the 27th November, 1930

President—Mr. Shakespear, you are the Senior Director of Messrs Begg Sutherland and Company?

Mr. Shakespear—I am not the Senior Director.

President—You are the Director in charge of sugar?

Mr. Shakespear—Yes, in a sense. I am now located at Rumlola which is one of our estates in Saran District.

President—Mr. Noel Deerr, what is your position?

Mr. Noel Deerr—I am engaged as an employee of Begg Sutherland and Company and I advise them in all matters relating to sugar.

President—Mr. Shakespear, you were on the Sugar Committee?

Mr. Shakespear—Yes, I was co-opted for part of the Committee's investigations.

President—You are acquainted with Java conditions?

Mr. Shakespear—I didn't go to Java with the Committee, but I have some knowledge of conditions in that country.

President—Mr. Noel Deerr, you are acquainted with conditions in all parts of the world?

Mr. Noel Deerr—I had been to Java for a month about six years ago on a holiday trip during which I obtained all the information I could.

President—You have kept your knowledge up-to-date on questions relating to Java?

Mr. Noel Deerr—Yes.

President—Mr. Atkins, you are in charge of what branch of Messrs Begg Sutherland's business?

Mr. Atkins—I am in charge of the Doulatpuri estate.

President—That is an estate which provides cane for the Samastipur factory?

Mr. Atkins—Yes.

President—In considering what factory we shall take as typical, should we take the process of sulphitation or carbonation?

Mr. Noel Deerr—We have to consider them almost separately, but I would like to be examined on carbonation as well.

President—Is there any particular reason why carbonation is a cheaper process?

Mr. Noel Deerr—I would suggest that we be examined both as regards sulphitation and carbonation. I believe that carbonation is an economic process to use in India. It is a more expensive process to operate, but it gives us a higher yield and a better quality of sugar. There is very little in it at the present moment between sulphitation and carbonation.

Dr. Matthai—In what sense?

Mr. Noel Deerr—In the economic sense.

Dr. Matthai—Supposing you got a better kind of sugar as a result of the carbonation process would you be able under Indian conditions to get a correspondingly better price?

Mr Noel Deerr —At present the difference in price between carbonation sugar and well made sulphitation sugar is much less than it used to be

Dr Matthai —Is it appendix M where you give the price of different qualities of sugar?

Mr Shakespear —Yes. It is difficult to say what actually is the difference in the market value of the two grades, for it might so happen that one factory's sugar was more heavily sold at a certain phase of that market than another type of sugar. I should think we might say about 8 annas per maund.

Mr Noel Deerr —Carbonation sugar fetches 8 annas more per maund.

Dr Matthai —I suppose most of the sugar that comes to India from Java is sulphitation sugar?

Mr Noel Deerr —Yes, but the carbonation process is increasing in use in Java steadily year by year. I haven't got the latest figures but I know that a number of factories are being converted from sulphitation into carbonation in Java.

Dr Matthai —As regards the capital expenditure would there be any considerable difference between a plant using carbonation process and a plant using sulphitation process?

Mr Noel Deerr —Not very much. The capital value of a sulphitation plant to turn out 100,000 maunds sugar per season like Glasgow is £50,000. £2,500 to £3,000 more is required for a carbonation factory.

Dr Matthai —I take it your statement really means that with reference to Indian conditions it would be necessary to consider both sulphitation and carbonation?

Mr Noel Deerr —Yes. The one reason is the location of the factory with regard to the source of limestone supply and the railway freight on the lime-stone. I might say that in the case of a new factory which we are going to put up, we have decided on sulphitation because of the additional expense of an extra 70 mile load on the railway. That was the deciding factor.

Dr Matthai —That is one of the determining conditions?

Mr Noel Deerr —Yes.

Dr Matthai —Which of the two requires better skilled labour to operate?

Mr Noel Deerr —I should say a sulphitation factory is more difficult to operate than a carbonation factory.

Dr Matthai —That would be a circumstance which would justify preferring carbonation to sulphitation in India?

Mr Noel Deerr —Distinctly so.

President —On the other hand in taking a factory which may be regarded as typical in India, there might be a difficulty in many places in establishing carbonation factories.

Mr Noel Deerr —Very much so because of the cost of landing the lime-stone at the factory.

Mr Shakespear —It is entirely ruled out in the Punjab.

President —Supposing our intention is to attempt the expansion of sugar factories in the direction of Meerut and Punjab, these will have to be sulphitation?

Mr Noel Deerr —Yes.

Mr Shakespear —I don't think there are any lime stone deposits available in the Punjab.

Dr Matthai —If you take the bulk of the sugarcane belt in India—this area extending from Bihar—from the point of view of getting lime stone, would you say that sulphitation might be better?

Mr Shakespear —Not where we are—in those factories where lime stone comes from quarries situated in the neighbourhood of Dehra-on-Sone.

Dr. Matthai—Supposing you take a long view, assume that the Indian industry under protection is going to develop and you are going to have factories all over the sugarcane belt, then how would the proposition appear to you?

Mr. Shakespear—In factories located within reasonable distance of Delhi or Soni I would put in a carbonation plant.

Dr. Matthai—But the bulk of the factories would not be carbonation?

Mr. Shakespear—They would not, unless new sources of supply of lime stone of which I have no knowledge are discovered.

Dr. Matthai—I understand Indian canes are a little more fibrous.

Mr. Noel Deerr—The canes that are grown now are considerably more fibrous.

Dr. Matthai—How does that affect the question of carbonation and sulphitation?

Mr. Noel Deerr—It doesn't affect it at all.

President—In Appendix Q you have given us an approximate estimate of the capital cost of a sugarcane factory of a capacity of 13 lakhs of maunds. Is it sulphitation or carbonation?

Mr. Noel Deerr—That is sulphitation.

President—Let us proceed in this way. We will take the cost of an average sulphitation factory first and then we will consider afterwards whether any alterations should be made on account of the carbonation factory.

Mr. Noel Deerr—Yes.

President—13 lakhs of maunds would be roughly 50,000 tons of cane.

Mr. Noel Deerr—Yes.

President—That might be regarded as a fairly typical factory to be set up in India suitable to Indian conditions.

Mr. Shakespear—That embraces the latest developments as far as we know.

President—Would you consider a capacity of 4,000 tons of sugar a year reasonable?

Mr. Noel Deerr—That is about a lakh of maunds of sugar. That would be a typical Indian factory, but a little on the low side as things now are.

Dr. Matthai—My point is this: supposing we are going to find what really is the typical size for India, then would you consider a factory that produces 4,000 tons of sugar a year from the point of view of cane supply and various other considerations a typical one?

Mr. Noel Deerr—Almost the exact average.

Dr. Matthai—On what considerations do you base that calculation?

Mr. Noel Deerr—I have given you the actual facts. It is the typical size as things stand at present.

Dr. Matthai—We are now producing 68,000 tons of sugar?

Mr. Shakespear—75,000 tons.

Dr. Matthai—Supposing we are going to develop and produce about 500,000 tons of sugar a year, could you count on getting the bulk of your factories to work up to 4,000 tons of sugar a year?

Mr. Noel Deerr—Yes. We are doing that already.

Mr. Shakespear—It depends on the concentration of the cane which is a determining factor.

Dr. Matthai—Taking the way in which the sugarcane is distributed in the sugarcane belt in India, can you depend on getting say 50 factories getting 50,000 tons a year within the next 10 or 15 years each of which would be within reasonable access?

Mr. Noel Deerr—I think we could, when we take into consideration the great concentration of the cane.

Dr. Matthai —Would you be able to give us figures to justify that conclusion? I notice in an article which you wrote for the Sugar Federation of the British Empire you attempt a calculation of that kind. If you look at page 40 in that paragraph, cost of yield, there is obviously a misprint, is there not?

Mr. Noel Deerr —“A circle of 32 miles diameter contains 51,472 acres and if 1 per cent of this area is under cane there will be available at the very low yield of cane in India over 50,000 tons of cane.”

Dr. Matthai —Is that right?

Mr. Noel Deerr —1 per cent of 51,000—it is a misprint.

Mr. Shakespear —I think the highest concentration that we know of is 7½ per cent.

Dr. Matthai —If you are going to assume 10 per cent of sugarcane to the total area, you might be assuming a much larger or higher proportion.

Mr. Noel Deerr —I had my idea that the industry would develop. I know that 10 per cent is high, but I see no reason why a certain area should not have 10 per cent under sugarcane.

Mr. Shakespear —Do you mean 10 per cent of the area in the district, *Mr. Noel Deerr*?

Dr. Matthai —It must be 10 per cent of the area in the district if you are taking a circle of 32 miles.

Mr. Shakespear —In calculating the percentage I think we should take the area of the land in the district which could be developed for cane. It is no good taking the area of the district.

Mr. Noel Deerr —The misprint is in the acres. It should be 514,720.

Dr. Matthai —That is better. That would justify the proposition absolutely.

Dr. Matthai —So that one per cent is taking a very low proportion?

Mr. Noel Deerr —That is so.

Dr. Matthai —On an average it is about 3 per cent?

Mr. Noel Deerr —About 2½ per cent I should say. The maximum in certain areas in Gorakhpur (in the N. E. of that district) is 12½ per cent. That is in certain small tahsils.

President —The first item in the costs of a cane factory is cane. In determining the cost per maund which we should take for a typical factory we have to consider—not what cost the present factories could afford to pay at the present price of sugar but at what price a new factory starting not necessarily in this part of India but somewhere in the northern part of India would be able to induce the cultivator to supply cane to the factory. So for that purpose we might have to take a rather higher figure than the existing factories are paying at present. On this point we have consulted the Directors of Agriculture and particularly *Mr. Clarke* in the United Provinces who, as you know, is in very close touch with the cultivators and also *Sirdar Sri Jogendra Singh*, Minister for Agriculture, in the Punjab and the general opinion is that if eight annas is paid for cane delivered at the factory, at the present time it would be a sufficient price to induce cultivators to bring the cane in.

Mr. Noel Deerr —I believe so.

President —Would you agree with that?

Mr. Noel Deerr —Yes.

President —*Mr. Burt* the Expert on the Imperial Council of Agricultural Research, has given it as his opinion that in the course of the next ten or fifteen years it is probable that owing to the introduction of improved Coimbatore canes this price can be reduced by 2 annas to say 6 annas.

Mr. Shakespear —They are getting enormous yields now and they have just started on these canes.

President —These figures would strike you as being reasonable figures?

Mr. Shakespear —Yes

President —At the present time may we take 8 annas a maund?

Mr. Shakespear —Yes, at the factory

Dr. Matthai —The point there being, although it might be possible for the grower to produce his sugarcane at a considerably lesser cost than 8 annas, in order to induce him to sell his cane to a sugar factory rather than turn it into *gur* he would have to be paid a price which corresponds more to the *gur* value of his cane than what it actually costs him to produce. Is that a correct proposition?

Mr. Noel Deerr —Yes. The cultivator always estimates what he would get for his *gur* before deciding whether he would make his cane into *gur* or sell his cane to the factory.

Dr. Matthai —That is true with regard to the whole of the sugarcane area?

Mr. Noel Deerr —In the part which I know, that is true.

President —Let us take 8 annas as the cost at a typical factory. What extraction shall we take for that factory?

Mr. Noel Deerr —I can speak of the factories managed by Messrs. Begg Sutherland and Company since they were put into a reasonable state of efficiency for the last five or six years—Their average recovery in sugar is 9.25 per cent. The other factories of which we have figures are averaging certainly less than 8½ per cent.

President —The average is 8.6 per cent for 1928-29.

Mr. Noel Deerr —Yes, the average for India.

President —In making an estimate of this nature, we could not base our extraction on the most efficient factory?

Mr. Noel Deerr —No.

President —So, in the present estimate, let us take 8.6?

Mr. Noel Deerr —Yes.

President —That would give us the cost of sugarcane per maund of sugar as what?

Mr. Noel Deerr —93 annas per maund of sugar—say Rs. 5.82.

President —What about the other raw materials? We shall take a sulphitation factory in this case. One factory is 1 anna 10.8 pies. Another sulphitation factory shows a figure of 2 annas 3.3 pies.

Dr. Matthai —Is that difference due to the difference in output? One production is 1.1 lakhs of maunds of sugar where the other is only 68,000 maunds.

Mr. Shakespear —One is in a *gur* making area and the other is supplied with cane under contract.

Dr. Matthai —Which is in the *gur* making area?

Mr. Shakespear —The second. The other company derives its cane under contract on a sliding scale.

Mr. Noel Deerr —Then cane is 11 annas cheaper per maund of sugar.

President —What shall we take for other raw materials? One is 1 anna 10.8 pies, and the other 2 annas 3.3 pies. We have a figure for another factory whose cost is confidential. It gives 11 pies.

Mr. Shakespear —I should think that 2 annas would be a reasonable figure for other raw materials in the case of a sulphitation factory.

President —The third factory gives the cost as 11 pies.

Mr. Shakespear —I do not know about that.

Mr. Noel Deerr —In other raw materials, are bags included?

President —No.

Mr. Noel Deerr —What figure did you take for the first?

President —1 anna 10.8 pies.

Mr Noel Deerr —That is right

President —This particular factory has given us figures from 1925-26 onwards. They are as follows —

A	P	A	P
2	4	1	2
1	2	0	11

Mr Shakespeare —It is steadily going down

President —Yes. This is single sulphitation and yours is double sulphitation. Would that make any difference?

Mr Noel Deerr —It would not make any difference

President —Don't you use more sulphur in the case of double sulphitation?

Mr Noel Deerr —1 anna 9 pies per 100 maunds of cane. It would not make any difference at all, at least it would not make any substantial difference

President —What is the main item in other raw materials in the case of a sulphitation factory?

Mr Noel Deerr —Coal, wood and oil

President —Would not coal and oil come under power and fuel?

Mr Noel Deerr —They would

President —Here is a comparative statement showing the costs of all your factories (shown to the witnesses)

Mr Noel Deerr —The difference in other raw materials is almost entirely due to limestone between carbonation and sulphitation factories

President —As regards sulphitation factories there is a small difference in the cost. What do you think would be a reasonable figure for a sulphitation factory?

Mr Noel Deerr —Two annas

President —Then we come to labour. Labour will be very much the same whether it is carbonation or sulphitation?

Mr Noel Deerr —A little more in carbonation but nothing to speak of

President —We must remember that in this typical factory which we are taking extraction is only 8.6 per cent, so that labour charges might be a little higher than some of your labour charges here

Mr Noel Deerr —Yes

President —Allowing for the difference in extraction, what shall we take for labour?

Mr Noel Deerr —Eight annas

President —Roughly we might take 8 annas?

Mr Noel Deerr —Yes

President —Now we come to power and fuel, which is very high in one factory

Mr Noel Deerr —That unfortunately is due to the design of the factory which we are trying to remedy as soon as we can

President —We cannot take that as typical?

Mr Noel Deerr —No

President —Here again power and fuel would depend on extraction. With a lower extraction your power and fuel would be higher?

Mr Noel Deerr —Distinctly so

Mr Shakespeare —The new factory of ours is going to be more economical than anything we have because all the subsidiaries are to be electrically driven

President —That would be only a very small amount, it might be a pie or two, not more than that

Mr. Noel Deerr —Yes

President —Including water and lighting which would amount to very little shall we take 1 anna 3 pies

Mr. Noel Deerr —Yes

President —That would be 1 anna 3 pies

Mr. Noel Deerr —Yes, with very efficient working. On the average it would be more

President —With an efficient working means an extraction of how much?

Mr. Noel Deerr —97 per cent over a term of years

President —With an extraction of 86 per cent it would be a bit more?

Mr. Noel Deerr —I would not like to say quite because a great deal of the expense under fuel is due to efficient working. If we work inefficiently we might get less sugar and burn no fuel at all

President —Then, if we took 1 anna 3 pies, that would be reasonable?

Mr. Noel Deerr —Yes

President —Including water and lighting?

Mr. Noel Deerr —Yes

President —What would be the proper figure to take for supervision, office charges, establishment and so on. We get very considerable variations between various factories. First of all, does it include head office charges?

Mr. Shakespear —Not in the works cost

Dr. Matthan —The head office charges are probably included but not the commission?

Mr. Noel Deerr —Could you give me the figure?

Dr. Matthan —It is 10 annas 106 pies

Mr. Shakespear —In the works cost, head office charges would not be included but in the statement showing the total expenditure that item would be included

Dr. Matthan —The works cost per unit is simply the average calculated on the aggregate output, is it not?

Mr. Shakespear —Yes. It must come under miscellaneous

President —The whole of head T includes establishment charges, European staff, Indian staff, European Staff Servants and other allowances?

Mr. Shakespear —The whole of the expenditure as paid at the factory including administration, European establishment, Indian establishment, technical control, haulage and traction and auditors' fees

President —These head office charges would not include such items as stationery and so on?

Mr. Noel Deerr —Stationery would come under miscellaneous charges

President —European staff would include Mr. Noel Deerr's pay, would it not?

Mr. Shakespear —A share of his pay and of the other members of the technical staff Chief Engineer Chief Chemist which are allocated and distributed throughout the group of Companies

President —In many companies' accounts they are put down as head office charges

Mr. Shakespear —Our Chief Accountant's salary is also split up amongst the Companies

President —As regards the amounts, they seem to vary from about 10 to 12 annas. For a factory crushing something like 13 lakhs maunds of cane it would be something between 10 and 11 annas

Mr. Shakespear —Yes

President—With lower extraction, 86, it would again increase so if we take the increase as the proportion which 86 bears to 92 that would give us a rough guide?

Mr Noel Deerr—It would

President—Let us say 12 annas. Now let us take Current Repairs. I suppose current repairs are much the same in sulphitation as in carbonation?

Mr Noel Deerr—There is no substantial difference

President—They range between 0-8 5 8 and 0-3 10 6

Mr Noel Deerr—They vary from year to year. One reason for that is that a major item is reshelling rollers. In one year we may have three reshells and in another we may have no reshell and we have to take the average number of years

President—Number of years for one factory or for several factories? Take for instance 1929. Supposing we took the average of these six factories would that give us any guide?

Mr Noel Deerr—Yes

Dr Matthai—That average would be rather misleading because you are averaging current repairs of factories of different sizes?

Mr Noel Deerr—Generally repairs done on a small scale would be more expensive per capacity of the factory than on a big scale

Mr Shakespeare—In one factory in one year it was 0 5 0 1 and in another year it was 0 10-8 9

Dr Matthai—Supposing we average the repairs and renewals at one factory for five years would it not give us a better average to work upon than if we averaged different factories?

Mr Noel Deerr—Yes, I think it would

President—That comes to 0 6 10

Mr Shakespeare—You might have a very big job coming in in one year—costly repairs to an engine or something like that

President—With less extraction it goes up?

Mr Shakespeare—You have to put that on to 8 6

Mr Noel Deerr—It will make it over 7 annas. It will come to 0 7-4

President—Let us make it 0-7-4. Now then let us take Packing. That depends I suppose on the price of gunnies?

Mr Shakespeare—Yes. We have changed our form of packing. We are now using single bags instead of double

President—That is going to continue?

Mr Shakespeare—Yes

President—At present the price of gunnies is very low, they are Rs 26 per 100, are they?

Mr Shakespeare—I think that is for 2½ lb bags. We tried bagging 1 maunds 30 seers but we had a lot of complaints about the bags bursting. So now we are packing 2 maunds 20 seers in 'A' Twill bags. About 2½ lbs, is the weight of a bag, and that costs at present Rs 35 or 36 per 100 bags. I should think packing would be about 2½ annas or 2 annas 9 pies. 2 annas 9 pies I think would be the safe figure to take

President—Let us take it as 2 annas 9 pies. Now let us go on to Miscellaneous. First of all we cannot understand from your costs why in one factory miscellaneous should run up to Rs 1-3 5 9 while the maximum of other factories is 14 annas. It is true your interest charges would be Rs 30,000 higher, but on the other hand agents commission is about Rs 30,000 less so these come out square

Mr Shakespeare—Yes

President—So it looks as if allowing for the efficiency of the factory being smaller—somewhere about a rupee would be right?

Mr. Shakespear—It depends upon the crop of course

President—Taking 14 annas and an efficiency of 86 against 92 what would it work out to?

Mr. Noel Deerr—Just over 15 annas

President—Then we may take 15 annas, that would be about right?

Mr. Noel Deerr—Yes

President—That gives us a total of Rs. 8-13-4. We have got to explore now the question of molasses

Mr. Shakespear—That is very difficult to say. Look at the situation today. We sold the output of our factories for this year at I think nearly a rupee more than last year.

President—But we don't propose to take the present price

Mr. Shakespear—It is going down now. We got Rs. 2-11-6 I think for the Samastipur molasses

President—How do you account for this?

Mr. Shakespear—The market may have had some idea that the duty was going up on Java molasses or alternatively they may have looked forward and calculated that some of the big refineries would not work—they had a disastrous year last year—or would probably curtail their operations. That would mean a very large curtailment in the supply of molasses

President—Do you think there is anything in the suggestion that owing to the non-co operation movement the sale of cigarettes has gone off and the people have taken to smoking *hooka* tobacco?

Mr. Shakespear—That may have been a contributing cause

Dr. Motthai—Is there any truth in the suggestion that the United States are trying to corner the market in molasses?

Mr. Shakespear—A large molasses' combine asked us three years ago to make a five years contract at Rs. 1-4-0 per md

Dr. Matthai—Is there any truth in the statement made by Mr. Wynne Sayer that Java molasses is unsuitable for preparing Indian *hooka* tobacco?

Mr. Noel Deerr—Nothing whatever. Java molasses and our molasses could not be identified one from the other

Mr. Shakespear—The trouble was that shippers refused to carry it in a liquid form and then they made them into cakes and began to bring them over in baskets

President—An increase in the price of imported molasses would affect the price of country molasses?

Mr. Noel Deerr—Yes

President—No one would challenge that statement?

Mr. Noel Deerr—Undoubtedly

President—The view put forward by him was that imported molasses was not used for preparing *hooka* tobacco out here and consequently local molasses had a big demand

Mr. Noel Deerr—Of course they have got to go to the trouble of melting the stuff down, that takes fuel, whereas in the case of our molasses they have got it in the form where they can mix it direct with their tobacco

President—Actually they import soft molasses too?

Mr. Noel Deerr—Yes, but shippers are very much against it

President—We have here a quotation for tanker molasses

Mr. Noel Deerr—That might happen

President —We have a quotation for tanker molasses. Mr. Wynne Sayer who is in close touch with this told us that he was not aware that tankers came to Calcutta, so it looks as if it was rather a new development. At any rate in taking a typical factory we are inclined to think that if we took the present rates our calculation would be fallacious, our feeling is that the fair price to take would be, say, for the present somewhere about Rs 180.

Mr. Noel Deerr —That is a fair basis.

Mr. Shakespear —It is more a question of whether refineries are going to carry on. We are considering the question of closing down ours now.

President —That would affect the price of molasses?

Mr. Shakespear —Yes. 7 or 8 lakhs maunds of molasses have been put on the market by the refineries in a year.

President —Let us see what the points are which might lead to a reduction in the price of molasses. The first is the closing down of a considerable number of refineries and the second is the use of the *hooka* in place of cigarettes. Apart from that are there any other considerations?

Mr. Noel Deerr —These are the important considerations.

President —I suppose there is another limiting factor and that is that if the United States Molasses Corporation corner the Indian market and really push up the price of molasses very much further at any rate in the upcountry markets, it would be worth while curing tobacco with *gur*. Cheap *gur* is selling so low as Rs 2.

Mr. Shakespear —I do not know if they would like the flavour. They are very particular about the molasses. They do not for instance like our carbonation cane molasses.

Dr. Matthai —I think they do mix *gur* in the Punjab with tobacco.

Mr. Shakespear —Possibly. I don't know about it in the Punjab. I don't think that is the standard practice however.

Dr. Matthai —There is also the consideration that if in the next five or six years you get more sugar produced, there will be more molasses on the market.

Mr. Shakespear —Yes.

Mr. Noel Deerr —If the sugar production increases, molasses production will increase in proportion and there will be a fall in the price of molasses.

President —Taking all these points into consideration if we took an average price of Rs 180 for the new typical factory, we should not be very far wrong?

Mr. Shakespear —It is very difficult to look into the future.

Dr. Matthai —Last year your Samastipur molasses were really sold at about Rs 140 a maund. That you think is abnormally low.

Mr. Shakespear —It is a very very low price.

Dr. Matthai —Rs 180 would be a fair figure to take?

Mr. Shakespear —Yes.

President —Samastipur last year turned out 68,000 maunds of molasses. At Rs 180 it comes to Rs 1,00,000.

Mr. Noel Deerr —Yes, Rs 1,10,000.

President —That is roughly a rupee a maund of sugar.

Dr. Matthai —You are calculating on the output of molasses at somewhere about 60,000 maunds which is almost 50 per cent of your sugar production.

Mr. Noel Deerr —Yes.

Dr. Matthai —Supposing you are trying to get the typical cost of this factory for the next few years, would you be justified in assuming such a high proportion as that?

Mr Noel Deerr — Our sulphitation factories' average is 4.47 per cent cane and our yield of sugar 9.21 per cent — $4.5 - 9.21 = 49$ per cent

President — That was with an extinction of 9.22?

Mr Noel Deerr — 9.21

President — With 8.6 you would get how much?

Mr Noel Deerr — The molasses would probably be in the same ratio

Dr Matthai — You mean the sugar would be lost elsewhere?

Mr Noel Deerr — Yes, in the case of the less efficient factories the sugar would be lost in the mill

Dr Matthai — For this purpose might we take 50 per cent?

Mr Noel Deerr — Yes

President — Then we have got to take a considerably smaller sum than 68,000. Your factory is going to treat 13 lakhs of maunds of cane

Mr Noel Deerr — 58,000 maunds of molasses

President — 58,000 maunds at Rs 1.80 would be Rs 87,000

Mr Noel Deerr — Yes

Dr Matthai — The point that I want to be quite clear about is this. We want to get a sort of formula for the amount of molasses that you can get. Do you calculate on the cane crushed or on the amount of sugar produced?

Mr Noel Deerr — On the cane crushed

Dr Matthai — What is the percentage?

Mr Noel Deerr — 4.47

Mr Shakespeare — 3.55—is the mean of their sulphitation factories in Java

Mr Noel Deerr — Java recovery of molasses is lower than ours solely because their purity of cane is higher, the efficiency of theirs being identical with ours

President — Now we have to take overheads. Your estimate for this factory crushing 13 lakhs of maunds of cane is Rs 18½ lakhs

Mr Noel Deerr — Yes

Dr Matthai — Could you give us a rough idea of the sort of equipment that it includes? It doesn't appear in this statement

Mr Noel Deerr — Appendix Q

Dr Matthai — How many rollers are there?

Mr Noel Deerr — 15 rollers. I am putting in 5.8 roller mills and I have eliminated the crushers

Dr Matthai — This is a sulphitation factory?

Mr Noel Deerr — Yes

Dr Matthai — It has a triple effect?

Mr Noel Deerr — It has a quadruple effect

Dr Matthai — And 3 massecuteres?

Mr Noel Deerr — Yes

Dr Matthai — Vacuum pans?

Mr Noel Deerr — 3 pans

Dr Matthai — That is the most up to date factory?

Mr Noel Deerr — That is the best factory I could design

Dr Matthai — If you presume a plant of this kind, our operation costs must presumably be slightly lower?

Mr Noel Deerr — Yes, they will be lower, because it would lead to economy in operation

President—What about the rates for depreciation? In answer to question 70 you say "the rates of depreciation allowed by the Income tax Authorities are 7½ per cent on prime cost of machinery and 2½ per cent for buildings."

Mr. Shakespeare—I had something to do with framing this scale some years ago. I don't think it was prescribed with regard to a sugar factory at all. It is really a scale for a textile factory. When Government decided on it for revenue purposes they adopted a single scale. We drew up a special schedule for electrical companies, but I think the general scale was really framed to suit textile factories where the wear and tear is far greater on that type of machinery. Most of our sugar machinery or at any rate a great deal of our machinery is stationary represented by tanks which, if well looked after, will last for 50 years. Our pans will last for 50 years. The only fast running portions of our machinery are the centrifugals. They might be properly rated at 7½ per cent. Taking the plant as a whole the scale is far too high. Then we carry out an annual overhaul spending Rs. 50,000 to Rs. 60,000 on such work. The whole question came up before our auditors in connection with the Samastipur factory, and they accepted that the money spent on materials in our annual renewals is a legitimate deduction from the depreciation allotment, not the cost of labour of course but the materials. I think 5 per cent is quite enough for machinery.

President—2½ per cent on buildings?

Mr. Shakespeare—2½ per cent is too high on pucca buildings. 2 per cent would be quite enough.

Dr. Matthai—As far as buildings are concerned, 2½ per cent is the rate allowed for income-tax purposes. There is really no reason why your buildings should be different from ordinary factories.

Mr. Shakespeare—For a pucca building if it is properly looked after 2½ per cent is too high.

President—Of this Rs. 19½ lakhs, how much is represented by buildings and how much by machinery?

Mr. Shakespeare—Rs. 10,00,000 roughly is represented by machinery which at 5 per cent comes to Rs. 50,000 and Rs. 3½ lakhs for buildings at 2½ per cent comes to Rs. 8,750.

President—The total depreciation comes to (Rs. 50,000 + Rs. 8,750) Rs. 58,750.

Mr. Shakespeare—Yes.

President—You have to spread that over an output of 110,000 maunds of sugar?

Mr. Shakespeare—It works out to 9 annas per maund.

President—Your depreciation is 9 annas a maund?

Mr. Shakespeare—Yes.

President—As regards profit, we usually allow 10 per cent.

Mr. Shakespeare—You must allow something for working capital.

President—We shall allow for working capital. Let us first calculate the profit on Rs. 13,50,000. How much does it come to?

Mr. Shakespeare—Rs. 1-50 per maund.

President—We will have to fix something for working capital. Could you give us any idea of the amount which would be outstanding during the year?

Mr. Shakespeare—It all depends on the market and our sales programme.

President—What we usually do is to take 1 month's production at the works cost. It works out very well in most of the industries.

Dr. Matthai—Four months production in the sense of one third of the year's output.

Mr. Shakespeare—We don't work throughout the year.

Dr Matthai—We can take one third of your output

President—It will cover all your stock of sugar, stores and everything

Dr Matthai—In the case of Samastapur supposing you had about Rs 10 lakhs of working expenditure when the whole season was over, your working capital which we would allow would be about one third of that, say Rs 3½ lakhs

Mr Shakespear—We try to sell all our sugar before 30th June

Dr Matthai—What you produce in four months you sell in eight months?

Mr Shakespear—Yes

Dr Matthai—Rs 3 to 4 lakhs would be a fair allowance?

Mr Shakespear—For that factory?

Dr Matthai—Yes

Mr Shakespear—I think so

President—Rs 3 lakhs for working capital?

Mr Shakespear—Yes How much interest are you going to allow? Are you going to allow 8 per cent?

President—No, we generally allow 7 per cent

Mr Shakespear—The incidence of that is just 3 annas per maund

President—That gives us a total overhead of Rs 2-1

Mr Shakespear—Yes

President—The agent's commission will I think come under miscellaneous

Mr Shakespear—Yes

President—This would mean that we make miscellaneous about 12 annas instead of 15 annas as before

Mr Shakespear—Quite so

President—Let us consider the same factory at the end of 15 years and see what we can reduce in the way of costs First of all we shall take the cane We agreed that we should take that at 6 annas Is that reasonable?

Mr Shakespear—Yes

President—Then we have to consider what our extraction is going to be after 15 years?

Mr Shakespear—That is an important point

President—We have taken 86 per cent with this very up to date factory

Mr Noel Deerr—At the end of 15 years under protection, every factory ought to be efficient, or ought to be made efficient I think we might say 92½ per cent We ourselves might hope to do 93½ per cent I don't think there would be any possibility of doing more

President—The sucrose content of your cane might improve a bit?

Mr Noel Deerr—It might Coimbatore might easily produce a cane which would give us a better yield than we have at present That is all problematical

Mr Shakespear—I don't think that we are going to stand still

Mr Noel Deerr—No Our highest yield was 1043 That was in an exceptional year for cane That might happen once in 7 years

Dr Matthai—In Bolapun they do better

President—That is with a better cane

Mr Noel Deerr—That is with a better cane In one remarkable year we had one factory with 1800 per cent sugar in cane But that was absolutely abnormal

President—Would we be going too high if we took 94 as a figure which we could attain after 15 years?

Mr Noel Deerr —No I think that is a fair figure to take

President —We have to work out extraction at 94 per cent

Mr Shakespear —The yield will be 1,22,200 maunds of sugar

Mr Noel Deerr —The cost will be 64 annas or Rs 4 per maund of sugar

President —It makes an enormous difference

Mr Shakespear —Yes

President —As regards other raw materials, might we take that in the ratio of 94 : 86, that is to say instead of being 2 annas, it would be $\frac{1}{2}$ of 2 annas?

Mr Shakespear —Yes

Mr Noel Deerr —Except of course that bags will remain constant

President —The cost of other raw materials will be how much?

Mr Shakespear —1 anna 10 pies

President —Labour Might we take it in that proportion?

Mr Shakespear —Yes It would be 7 annas 4 pies

President —Power and fuel?

Mr Shakespear —1 anna 2 pies

President —Supervision, office charges and establishment? There again it would be in the same proportion

Mr Shakespear —Yes It would be 10 annas

President —Current repairs will be how much?

Mr Shakespear —6 annas 10 pies

President —Packing remains constant?

Mr Shakespear —Yes, at 2 annas 9 pies

President —Miscellaneous would work out to 10 annas I think?

Mr Shakespear —Yes

President —The total will be how much?

Mr Shakespear —Rs 6-7-11

President —Then we come to molasses In 15 years we cannot assume that you are going to get Re 18

Mr Shakespear —Take it at Re 1

President —You might have 15 factories turning out very large quantities of molasses

Mr Shakespear —They will replace molasses now produced by a number of small producers

Mr Noel Deerr —There will not be more molasses unless there is going to be an increase in the quantity of cane

President —You will not only extend beyond the khandasari area in Rohilkhand and Meerut area but also right up to the south Punjab

Mr Shakespear —Yes, with the largest degree of development

Dr Matthai —You would accept a rupee as a fair price?

Mr Shakespear —Yes

President —As regards the amount of molasses, shall we take 86/94th of the previous figure

Mr Shakespear —No

Mr Noel Deerr —I don't think so It will be chiefly in the milling that the increase in sugar will be obtained So, the quantity of molasses will remain the same

Dr Matthai —Since you are getting more sugar from the same amount of cane, the quantity of molasses will remain the same?

Mr Noel Deerr —Yes

President—So that 58,000 maunds at one rupee on 1,22,000 maunds output of sugar would come to As 7-7 That is practically Rs 0 Now we have to add overhead charges to that Our machinery would be the same and depreciation would be As 7-8 per maund

Mr. Shakespear—Yes

President—Profit will be Rs 1-75 000 on 1,22,000, that would be Re 1-1-9 As regards working capital the interest will work out at As 2-2 The total would therefore come to Re 1-11-6 to which has to be added Rs 6-0-4 That gives us Rs 7-11-1 The initial cost is about Rs 19-12 since we have reduced the item miscellaneous by the removal of interest charges and the average for the whole period on that would be about Rs 8-12

Mr. Shakespear—Yes, the mean between the two

President—Now let us consider the import prices The present price in Calcutta is about Rs 8-8

Mr. Shakespear—It is below Rs 9 I think

Dr. Matthai—The latest figure is Rs 8-2-6

President—Out of which Rs 1-6-8 is the duty That gives us, say, Rs 3-12 as the landed cost We cannot tell in the least whether on these figures Java are making their full profit, then full depreciation and all the other things So that what we shall attempt to do is to form some rough estimate of what the Java costs might be expected to be at present I had better tell you how we proceed We have the figures given by Pinson (Cairns) in the Report of the League of Nations and he has given one factory there which apparently represents about the average cost of production Taking these figures which are for 1926 we allow for the increased output of sugar per acre in Java in the last four years and reduce the cost of material in that proportion Then we have made a reduction in the costs other than raw material on account of improved efficiency in extraction In this manner we have come to the conclusion that the average cost of Java sugar on a rough estimate is Rs 9-14 per maund, f.o.b. Then we have taken a credit for molasses of 5 annas per maund sugar allowing molasses at Re 1-4—we have very little information as to what price they are getting for molasses This gives us a net f.o.b. price of Rs 9-9 per maund, carriage to Calcutta amounts to 3 annas a maund and another 3 annas must be added for landing and handling charges, giving a total landed price of Rs 9-15 per maund

Mr. Noel Deerr—We have got to take 2 annas for handling in Calcutta

Dr. Matthai—Is that based on actual analysis of charges?

Mr. Noel Deerr—No

Dr. Matthai—The figure we have got is As 2-9 as the correct analysis of the charges

President—Let us take As 2-9 Allowing full amount of depreciation but no profit they could land at Calcutta at about Rs 3-15

Mr. Noel Deerr—Yes

Dr. Matthai—They are actually landing at Rs 3-12

President—What is your opinion, Mr. Noel Deerr?

Mr. Noel Deerr—The very best of factories could land at Rs 3 and the worst at Rs 4

President—If we take a reasonable landed price for 15 years of Java, and remembering that they may improve Rs 4 might be taken as the price which would give a large number of factories a considerable profit?

Mr. Noel Deerr—Yes

President—At any rate they would incur no loss over a long period of years?

Mr. Noel Deerr—No

Dr. Matthai—At Rs 8 a maund the best factories could land their sugar in Calcutta without duty?

Mr Noel Deerr —Yes

Dr Matthai —And the worst factories at Rs 4?

Mr Noel Deerr —Yes

Dr Matthai —What kind of charges do they include? Do they include depreciation and so on or is it the actual works cost?

Mr Noel Deerr —That is a point on which I have got no information at all

Dr Matthai —That is rather important for our purpose

Mr Noel Deerr —Yes, it is

Mr Shakespear —I understand some of them have written down their block accounts to practically nothing and they have no depreciation at all to provide for

President —I was going on with that particular point *Mr Noel Deerr*, would you think that this particular method which we have adopted is likely to give fairly satisfactory results?

Mr Noel Deerr —I think it would

President —In this estimate there are various items which would be susceptible to considerable reduction. For instance depreciation is given at 11 annas. As *Mr Shakespear* was saying, many of these factories have written down their block account and they need take nothing to depreciation now. If we consider what are the possibilities of what we usually call dumping, we might take away from Rs 4, 11 annas?

Mr Shakespear —Yes. If the field improvements go on at their present rate, in 15 years we may see still more magnificent canes.

President —There are other figures which we have been given to understand may admit of substantial reduction, for instance overhead, rates and taxes. We have included here a figure of 12 8 annas.

Mr Shakespear —That is very high

President —*Mr Wynno Sayer* told us that in an emergency arrangements would be made for a reduction in rates. He is also inclined to take this item into consideration in considering the question of dumping. I imagine that it would include any Government taxes there might be and their contribution to the general administrative arrangements run by the Trust.

Mr Shakespear —That would of course come in. The Trust is not a Government institution. It is supported by the industry.

Dr Matthai —Have you any information about the arrangements? It is about 6 sh per bouw.

Mr Noel Deerr —Yes, 1 bouw is equal to 1½ acres.

President —That really comes to half an anna.

Mr Shakespear —I fancy there is direct taxation as well. There must be some form of income-tax on the profits of the sugar companies.

Dr Matthai —If they are paying anything in the nature of local rates, that has got to come out.

Mr Shakespear —Yes. *Mr Goeligs* information should be accurate, because he is in close touch with the industry.

President —At any rate there seems to be a margin for some reduction in this 12 8 annas. Your information is Rs 3 is the price at which the best factories could land their sugar in India?

Mr Noel Deerr —Yes

President —Supposing they really decided to keep the Indian market and they saw factories starting in India, and they desired to nip these factories in the bud so to speak, that would mean a very intensive price war probably for a couple of years. Could they go as low as Rs 2-8?

Mr. Shakespear —The limit would in such circumstances be their financial resources

President —We understand that they have very large reserves

Mr. Noel Deerr —Yes. It would all depend on how much of their crop they could sell west of Suez on which they make a profit and on what proportion they could afford to sell below cost of production

President —That is to say if they really wish to attack the Indian market, they would attempt to get a better price west of Suez in order to cut their price here

Mr. Noel Deerr —Yes

President —If there was any arrangement as to the stabilisation of price or restriction of output, that would put the Java industry in a better position for dumping in India?

Mr. Noel Deerr —Yes

President —Because they would be getting a higher price in Europe

Mr. Shakespear —They would be in a very much stronger position for dumping in India

Dr. Matthai —Is there any possibility of their charging a higher price west of Suez?

Mr. Noel Deerr —They were not getting a better price west of Suez than in India before

President —Not now?

Mr. Noel Deerr —I am talking of some years ago

Dr. Matthai —Whether they would charge a higher price would depend on Cuba's position and beet primarily?

Mr. Noel Deerr —Yes, and other places like Hawaii

Dr. Matthai —In the absence of any restriction scheme and with a larger production in Cuba and beet, that possibility would not arise

Mr. Noel Deerr —No. But with restriction it would

President —Any improvement in the China market might enable them to get a better price

Mr. Noel Deerr —Yes

President —If conditions in China improve, it might be possible for Java to sell larger quantities and obtain a better price than at present. To that extent they might be able to dump still further in India

Mr. Noel Deerr —Yes

Dr. Matthai —In China they would be up against competition from Formosa?

Mr. Shakespear —No. The whole of that raw sugar goes to the Japan refineries. The financial position of Cuba must be very bad. They have spent all their profits!

Dr. Matthai —What about the present position as regards the negotiations for restriction?

Mr. Noel Deerr —We know very little. There seems to be a tendency at the present moment for restriction

Dr. Matthai —Supposing the negotiations succeeded and sales to America were restricted, there would be all the more dumping in this part of the world?

Mr. Shakespear —Yes. They talk of holding 1½ million tons merely to help the American bankers out of their difficulties

Dr. Matthai —They might be able to take advantage of the whole of the preferential duty

Mr. Shakespear —How are they going to sell the whole of their sugar? You cannot keep sugar out of the market like cotton. You can keep cotton out of the market for three years. And it will not go bad!

Dr. Matthai —How long can you keep raw sugar?

Mr Noel Deerr —You can keep it for 12 months, but by then there would be continuous deterioration

Dr Matthai —But you can keep it at a stretch for 12 months

Mr Noel Deerr —I don't think there is any hope of Chadbourne's plan materialising

President —Mr Wynne Sayer told us the other day that in his opinion if the Java Trust really made up their minds to retain the Indian market and prevent factories starting on any considerable scale out here they might at a pinch land their sugar at Rs 2-4 a maund at Calcutta

Mr Shakespear —I should say Rs 2-8

Dr Matthai —Then Rs 2-8 was their first cost That is their ex-factory price

Mr Noel Deerr —My Rs 3 was the c.i.f. price

Mr Shakespear —What Mr Wynne Sayer means I think is that if they intended to fight with their tremendous resources they might decide to dissipate these resources and come down to anything

Dr Matthai —You can't set any limit to that

Mr Shakespear —No

President —He considered that if they wished to draw upon their resources they might get down to a price of Rs 2-4 at Calcutta

Mr Shakespear —Yes

President —You consider that Rs 2-8 would be a price at which they could land without drawing on reserves?

Mr Noel Deerr —I think so on the assumption that they make profits on their sales outside

Mr Shakespear —That is dumping presumably

President —Do you think that it would be wise if we want to avoid all possibility of dumping to take a figure of Rs 2-8 as the landed price in Calcutta?

Mr Noel Deerr —Yes

President —That is to say, when we consider the additional duty after we have added it the basic duty which would normally be enough for the industry We have to consider during the early years of protection whether we should impose any additional duty partly to provide that new factories can be started and partly to protect the khandais and partly also as a provision against any possible dumping

Mr Shakespear —Yes, an additional duty which you should have in hand You would only keep it in force as long as it was necessary

President —The idea is this in order to meet these requirements—firstly to prevent any dumping by Java, secondly to provide new factories starting now with a chance of putting up reserves and obtaining a sufficient supply of cane, and thirdly to maintain the khandais—during the first years of the protective scheme, we are considering whether in addition to the duty which we might find necessary for the whole of 15 years it might be necessary to put on another additional duty for the first seven years

Mr Shakespear —Yes That would be an elastic duty

President —The form and amount of that additional duty we should have to decide Really the limit would be the limit to which the Java people could possibly reduce prices if they decide to dump

Mr Shakespear —Yes

Mr Noel Deerr —It is bound to be

President —Mr Noel Deerr gives it as his opinion that an extra duty of Rs 1-8 would probably meet the case That Rs 1-8, if it was introduced, would have to provide against first of all the possibility of intermittent dumping by Java Then, even if it was not required to meet dumping, it would be required to give the new factories a good start and to protect the khandais

Mr. Shakespear—Otherwise the khandsais would go out of business. That was realised at the time when the countervailing duties were put on against bounty fed sugar. That was what Lord Curzon had in mind when he introduced the Countervailing Duties Act.

Dr. Matthai—Practically the whole of Rohilkhand depends on that.

Mr. Shakespear—They would go and gradually with them the cultivation of cane in those areas. That was what was feared at the time and I suppose that is the fear to-day.

President—Let us see what we have got to now. We have taken Rs. 4 as the price at which normally the Dutch would land their sugar in Calcutta and we have arrived at a fair selling price of Rs. 8-12 for the period of protection. If we subtract Rs. 4 from that, we get Rs. 4-12 as the duty per maund.

Mr. Shakespear—Yes.

Mr. Matthai—The landed duty free price is Rs. 4 and the fair selling price is Rs. 8-12. So you need a duty of approximately Rs. 6-8 per cwt. It would be an anna short of that, but approximately it would be Rs. 6-8 per cwt.

President—That would mean that the landed price in Calcutta would be Rs. 8-12, and the cost upcountry—say in Cawnpore—would be about Rs. 10-4.

Mr. Shakespear—The duty is Rs. 6-6 per cwt. I think.

President—Yes. We were told by Mr. Clarke that they would want a price of Rs. 12. If we took a duty of Rs. 6-8 per cwt. for 15 years and an additional duty of Rs. 1-8 per cwt.—which should be Rs. 1-1-6 per maund, it would come to about Rs. 11-8 per maund which is between Rs. 11 and Rs. 12 which Mr. Clarke postulates.

Mr. Shakespear—That would give you about Rs. 10 in Calcutta.

President—Yes. That would mean during the first 7 years if an additional duty was put on, the khandsais would be able to carry on and pay the cultivator somewhere about 8 annas a maund.

Mr. Shakespear—Yes, and I hope improve their methods.

President—At the same time it would protect any white sugar factory, if any was started, from dumping.

Mr. Shakespear—Yes.

President—Mr. Noel Deerr, do you consider that satisfactory?

Mr. Noel Deerr—Yes.

Dr. Matthai—As regards the prices of Rs. 3 and 1 for best and worst factories in Java, is there any kind of detailed statement on which you base these figures?

Mr. Noel Deerr—Yes. My data however relate to 1925.

Dr. Matthai—And you have made deductions?

Mr. Noel Deerr—Yes.

Dr. Matthai—I wonder if it would be possible for you to give us a note on that?

Mr. Noel Deerr—Yes.

Dr. Matthai—It would be rather useful if you could send it in.

President—In that note, you could state the costs which you have assumed under various heads, could that be done?

Mr. Noel Deerr—Yes.

President—In working out the Dutch costs we have assumed that all that they get for their molasses would be Rs. 1-4 per maund.

Mr. Shakespear—At present?

President—Yes. We have practically no information.

Mr. Shakespear—I think that it is very difficult to get any information.

President—The Java Trust do not sell molasses as such?

Mr. Shakespear —I think they sell through their agents

President —All the factories sell it themselves. Then the present costs in Calcutta of molasses apparently might not affect in the least the actual prices obtained by the factories

Mr. Shakespear —They must be very glad to get anything for their molasses

President —At present they are producing and landing methylated spirit at about 14 annas which is very much lower than the price of molasses would justify

Mr. Shakespear —They have knocked us out entirely in this trade!

Dr. Matthai —We came across a note by Punsen Gierligns in "Facts about Sugar" in which he said that the price realised by them for molasses f o b factory was from 8 dollars to 9 dollars per metric ton

Mr. Noel Deerr —Yes

Dr. Matthai —That works out to about a rupee per maund—I mean the top figure

Mr. Noel Deerr —That is the price for molasses at the factory in Java. That is about the world's price now

Dr. Matthai —If we took an intermediate figure between 8 and 9 dollars say 7½ dollars, it would work out to about 14 annas a maund at the factory in Java

Mr. Noel Deerr —Yes

Dr. Matthai —Do you think that it would be a safe figure to work on?

Mr. Noel Deerr —Yes

Mr. Shakespear —I think it is very difficult to get accurate information about it

President —You take one rupee as the probable price for molasses?

Mr. Noel Deerr —Yes

President —They sell their molasses forward?

Mr. Noel Deerr —Yes, they all sell forward

President —If the present prices of molasses continue, in three years time they might get rather more than one rupee

Mr. Noel Deerr —The price of molasses is so variable that I would not like to give my opinion on it

Mr. Shakespear —It seems to follow no rules

President —The price of sugar goes down and the price of molasses goes up apparently

Dr. Matthai —What is this figure which you have given in your replies to the questionnaire?

Mr. Shakespear —That is an old figure I got, which is not I think reliable

President —The best thing is to take such facts as we know such as the increase in output of cane as a result of P. O. J. and make the resulting reductions in such costs as we have and then make another reduction to be on the safe side

Mr. Noel Deerr —Yes

Mr. Shakespear —We really know nothing about their taxes

Dr. Matthai —Are there any publications, that you can refer us to, which give a correct statement of the reserves of the more important companies?

Mr. Noel Deerr —No

Mr. Shakespear —The Sugar Committee got hold of a specimen of an annual return which showed their capital and reserves and everything. If you knew where the files of the Sugar Committee were, you could find that out

President—You mean the Sugar Committee of the Imperial Council?

Mr Shakespear—No I mean the Indian Sugar Committee

President—An industry on which such a great proportion of the agriculturists in India depend cannot take chances. Unless the Java people publish their costs or approach the Tariff Board in regard to this question—they have put in no application to the Tariff Board against protection—they must be prepared to take the consequences. We must be on the safe side. The Dutch interests have no real ground for complaint. In the match enquiry which we held, the Swedish Match Company presented their case. We have not so far received any representation from the Java manufacturers, so that they have really no ground for complaint.

Mr Noel Deerr—Quite

Dr Matthai—What is your opinion on this question? Taking the proposal as the President stated it, supposing we suggested that a duty of say Rs 6 or somewhere about there should be levied on sugar for a period of 15 years.

Mr Shakespear—That is practically stabilising the present duty.

Dr Matthai—That is the basic duty, that is to say whatever happens in the next 15 years this duty will remain. During the first 5 or 7 years when there is a possibility of dumping and various other things, we have an additional duty—for argument's sake let us say it is Rs 2. That duty of Rs 2 is in force for seven years. At the end of 7 years, our idea at present is to suggest that there should be an enquiry.

Mr Shakespear—Yes.

Dr Matthai—Supposing as a result of the examination it turns out that the duty may be reduced, it can be reduced to any figure but not less than the basic duty.

Mr Shakespear—You are going to stabilise that. That is similar to the guarantees given to the beet sugar industry in the United Kingdom.

Dr Matthai—One point in connection with that on which I should like to get your opinion is this. If you give an industry protection for a period of 15 years it seems to us rather important that the industry should have a sense of security.

Mr Shakespear—That is even more important than the actual amount of the duty to my mind.

Dr Matthai—When you propose an enquiry in the middle of a protective duty, it practically amounts to a general inquest so to speak. The industry has to submit to an examination and give its costs.

Mr Shakespear—Regulations could be imposed.

Dr Matthai—Our idea at present is to suggest that the enquiry should be confined simply to the question of import prices, that is the only circumstance with reference to which the additional duty can be reduced.

Mr Shakespear—I think in that enquiry you should consider the factor of efficiency. Having got the protective duty, if the industry makes no effort to improve its efficiency, you ought to do away with it.

Mr Noel Deerr—I would express the view that the protective duty should be so regulated that it does not stabilise inefficiency.

President—Let me put it this way. Take these two duties Rs 6 for 15 years and Rs 8 for the first seven years. Let me state the case in this way. At the end of 7 years the duty would be automatically reduced from Rs 8 to Rs 6 unless it should appear at the enquiry which would be held at that time that owing to dumping or reduced costs or any other reason the Dutch c.i.f. cost which we have assumed at Rs 4 has been reduced.

Mr Shakespear—Only as regards Java?

President—Yes.

Mr. Shakespear—Are you not going to consider the question of alternative invasion from Europe?

President—Do you consider that that is probable?

Mr. Shakespear—Those people are protecting themselves. Supposing Russia carries out its five year scheme. Nobody seems to have much faith in what Russia is going to do, but there is the contingency of dumping from that quarter.

Dr. Matthai—If Russia invaded India, that would be reflected in the Dutch or Java prices?

Mr. Shakespear—I think Russia is planning to put 3 million acres under cultivation. Under the scheme the population of Russia is not going to be allowed to eat the sugar that it is made to grow. All that has to be turned into cash for the Soviet Government.

President—Let us suppose the Soviet Russia is to land its sugar in Bombay or Calcutta at Rs. 2-8. Presumably the Java people would have to reduce their price to Rs. 2-8.

Mr. Noel Deerr—Naturally.

President—Under the arrangements, as suggested by my colleague, at the end of seven years if in our enquiry it was found that sugar was being introduced into Calcutta at Rs. 2-8, the only scope for reduction in the duty of Rs. 8 would be 8 annas.

Mr. Shakespear—Yes.

President—That is to say, all those considerations such as the necessity for giving newly started factories a chance of establishing their efficiency, getting them adequate supplies of cane or even the question of khandsais—all these might be considered and the protection given on that account would disappear, the only point remaining being whether there is room for dumping.

Mr. Shakespear—It would be something like the Canadian and South African anti dumping clauses in their tariffs.

Dr. Matthai—That is rather different. They can vary the duty from time to time. We are ruling out variation during the first seven years.

Mr. Shakespear—If they think at any time that there is any dumping from any quarter they can vary their duty.

President—We do not do anything of that sort.

Mr. Shakespear—There is no stability now. We as an industry do not know whether the duty is going to be halved next year.

President—Take the Steel industry for instance. We have always enquired into Tata's.

Mr. Noel Deerr—In seven years under those conditions we would be absolutely stabilised. In case the duty was reduced, we should be able to meet competition from outside. They should adopt a conservative policy in putting factories up and then be in a position to meet a fall in the duty after seven years. In my opinion it would be bad administration and bad finance on the part of the producers if they did not.

Dr. Matthai—I notice from your replies to the questionnaire that you expect that if protection was granted to the sugar industry it would not be impossible to raise the Indian output from the present figure to somewhere about 500,000 tons.

Mr. Shakespear—The late Mr. Noel Paton, who was the first Director of Commercial Intelligence, and I collaborated in a scheme and I think we got at a figure of 147 centrals to produce India's requirements of white sugar because we were not aiming at anything very large in the way of a unit. We considered in how many areas we could have sufficient cane concentrated to put up a big factory—none of our factories here are big—so that we got at a figure of 147 centrals in Northern India to produce 700,000 tons of white sugar.

President—How did you work out the number of your centrals?

Mr. Shakespear—We had some sugar factories working then. So we were aware of the figures!

President—Had you actually been to the areas and ascertained about the suitability of the factories?

Mr. Shakespear—We did not of course know about the new canal scheme for Oudh then. That was not even mentioned in those days. We took the areas as they stood and made a sort of rough and ready calculation. Mr. Noel Paton wrote a pamphlet on it.

Dr. Matthai—In the present estimate that you have put forward in this communication you state about 50 factories accounting for an additional output of about 450,000 tons. That is rather a big output.

Mr. Noel Deerr—That is 9,000 tons per factory. That is almost identical in size with the biggest factory now working in India. Champur in is just under 2 lakhs of sugar.

Dr. Matthai—May we take it that it is a feasible proposition?

Mr. Shakespear—Given the canalisation yes. I believe the extension of cane in Oudh will be enormous with the help of the canal water, I am convinced of that.

President—Mr. Atkins, how long have you been manager of Daulatpur?

Mr. Atkins—About 14 years.

President—During the whole of this period you have been growing cane for Samastipur?

Mr. Atkins—I have been growing cane during the last nine years.

President—When did you start growing Combahtore cane first?

Mr. Atkins—About 1927-28.

President—What was the cane you found most successful?

Mr. Atkins—Co 218 and Co 214.

President—You are growing these practically exclusively?

Mr. Atkins—Yes.

President—No Co 219?

Mr. Atkins—On a very small scale. It was attacked by white ants and that was due to the bad field on which it was grown.

Dr. Matthai—The whole of the estate is under Combahtore cane?

Mr. Atkins—The whole area which is under cane is Combahtore cane.

Dr. Matthai—What is the area of the concern?

Mr. Atkins—It is about 1,600 acres.

President—Of which approximately one third is under cane?

Mr. Atkins—Yes.

President—What is your rotation?

Mr. Atkins—Cane on cane only, one year cane one year fallow.

Dr. Matthai—The cane is on the ground for about 15 months?

Mr. Atkins—It starts in March and ends in April, say from the middle of February to the end of May.

Dr. Matthai—Including the preparation of soil do you mean another three months?

Mr. Atkins—Yes, 18 months altogether.

Dr. Matthai—And then you allow that to be fallow for a whole year?

Mr. Atkins—Yes.

Dr. Matthai—That is to say it is 2½ years?

Mr. Atkins—Not quite 2½ years.

President—How do you find Combahtore cane compared with dachin cane?

Mr. Atkins—There is no comparison at all it is far better I should think it is about 200 per cent increase, that is my experience

President—You say your outturn is 525 maunds per acre What would be the outturn of deshi cane?

Mr. Atkins—It would be less than 200 maunds

Dr. Matthar—What proportion of the area cultivated is under Co 214?

Mr. Atkins—It is approximately about one-third

Dr. Matthar—I suppose the main point about 214 is that it is an early ripening variety?

Mr. Atkins—Yes There is another point You get a higher price and you can harvest it very early and from the first portion from which your cane is harvested you can get a catch crop of rabi, and then it gives you a longer period in which to cultivate your land

Dr. Matthar—We have been told that it contains more fibre than Co 213

Mr. Noel Deerr—Yes Co 214 will contain 16 to 17 per cent as against 14 of other Coimbatore canes

President—So that you don't need so much additional fuel for 214?

Mr. Noel Deerr—No

President—In these costs of yours the first item is rent Who is the malik to whom you pay Rs 7?

Mr. Atkins—If you hold the lands under *khandani* rights which a large majority of estates do you have to pay the landlord a certain rate that averages in this part of Bihar something like Rs 7 per acre

President—The malik in this case is Messrs Begg Sutherland & Co?

Mr. Atkins—No We have got permanent rights in the land and we have to pay the Indian landlord or the Ry whoever it may be a certain rent per annum and that approximates to Rs 7 per acre

President—Why do you make a deduct entry?

Mr. Atkins—That I do for this reason, that if I do not grow cane I can let out my lands at a settlement with under tenants for approximately Rs 30 per acre and I think that is a fair charge to the costs

President—That is to say as far as cane is concerned you debit the cane cost with Rs 30 and credit it with Rs 7?

Mr. Atkins—Yes, and make a total charge of Rs 23 per acre

President—Why do you credit yourselves with Rs 7?

Mr. Atkins—Because I am the tenant

Dr. Matthar—You mean you might be able to let it?

Mr. Atkins—I know I will be able to let it If you are working out what your cost is going to be, you have to debit the value of the land to yourself at what it is worth to you I know if I do not grow cane I can get Rs 30 per annum per acre for that land

President—Why don't you enter the rent as Rs 30?

Mr. Atkins—I am taking in Rs 30 and paying out Rs 7 Say, for example, you are letting out your land, you say "this land is worth to me Rs 30, that is the rent I get in and for that I pay out Rs 7 to my malik" so that the actual value of the land is Rs 23 In other words your actual return per acre from these lands would be Rs 23, that would be your profit in the year That is why I am doing it

President—What is this *Tumri* of old crop?

Mr. Atkins—That is an ambiguous phrase That means hoeing out the cane which was in the land before the new cane comes in

President—That is really preparation of the land?

Mr. Atkins—Yes, it is

President—Do you find this press mud satisfactory as manure?

Mr Atkins—It is very good indeed

President—You do not use any artificial manures at all?

Mr Atkins—We are doing it this year, but before this we had not done it to any extent worth mentioning

President—Your farmyard manure you obtain from the farm?

Mr Atkins—No I buy all farmyard manure from the villages and I pay so much per maund or so much per cart load within a reasonable distance and they come and put it on to our lands

President—Do they just come and dump it in the fields?

Mr Atkins—Yes

Dr Matthai—This seed cane—you use 70 maunds per acre?

Mr Atkins—Yes

Dr Matthai—Your yield is 525 maunds?

Mr Atkins—That is including low tonnage canes like Co 211

Dr Matthai—What I am trying to get at is, what is supposed to be the general proportion between seed and yield per acre in these areas? Is it 70 maunds to a yield of 600 maunds?

Mr Atkins—That depends on the climatic condition

Dr Matthai—Supposing you are taking the cost of cultivation in the area with which you are concerned, there is an economic proportion of seed to outturn, isn't there?

Mr Atkins—Yes

Dr Matthai—That is to say if you get, taking for example, Co 218, say, 600 maunds, the outlay on seeds for that yield per acre is on your figures 70 maunds?

Mr Atkins—Yes

Dr Matthai—About $\frac{1}{3}$ th?

Mr Atkins—Yes

Dr Matthai—Is that the general average?

Mr Atkins—The average depends upon your planting and that is the average which I find produces that result in my farm

Dr Matthai—We got a figure from some other person of about 20 per cent

Mr Atkins—I think that is wrong

Dr Matthai—May we take this as about the lowest on which we can work?

Mr Shakespear—It is rather higher than I sow I do not sow more than 50 maunds

Mr Atkins—You have your lines on which you sow, say 2' 6" and you may be planting with seed which may be from a very vigorous plant I may be sowing from a plant which is much heavier than the man next to me He is doing the same planting and his seed will naturally weigh less than mine

President—Who are these Tokidars?

Mr Atkins—They are a sort of farm hands who are in charge of certain areas outside the immediate home farm just round about the estate The estate is very scattered, the length is about 14 to 15 miles and the breadth is 6 miles and anybody looking after the zones outside in the scattered portion of the estate is called a Tokidar

President—As regards your irrigation charges, do you pay so much for irrigation?

Mr Atkins—We have got our own plant

President—How do you estimate these charges?

Mr Atkins—That is not an estimate, that is actual calculation on the actual costs for the year.

President—What about overheads on the plant?

Mr Atkins—All the overhead comes under establishment charges. All the drivers' pay and pay of the man working in the fields are charged to the head 'Irrigation'.

President—What was the capital cost of your irrigation?

Mr Noel Deerr—Rs 30,000. It might have been very much less, but I made one or two mistakes in putting down the plant which added very considerably to the cost.

President—You said that a portion of the overhead charges and interest on that comes under establishment charges?

Mr Noel Deerr—There are no charges there for depreciation or interest on capital. I am afraid this is not a complete statement.

Mr Shakespear—Depreciation is dealt with in the Head Office.

President—It would be a charge in estimating the cost of cane?

Mr Shakespear—Yes.

President—It would be a couple of thousand rupees?

Mr Shakespear—Yes.

President—What is the establishment charge? Does it cover your pay?

Mr Atkins—It covers my pay and that of my assistants. For purposes of arriving at the cost of cane I have taken half the cost of the establishment charges and put it down to the cane, and the other half I have debited to the zamindari and growing other crops like oats and so on and cane propaganda amongst the ryots.

President—I think you don't grow any other crops.

Mr Atkins—The only crop I grow is oats besides cane. I have 80 acres of oats besides—lands which are not suitable for growing cane.

President—All the establishment charges are debited against that?

Mr Atkins—Yes and the zamindari.

President—What is the zamindari?

Mr Atkins—Collection of rent and letting out lands for Co-operative Societies and general propaganda amongst ryots for growing cane.

President—You estimate the cost of cane delivered at the station at 5 annas 6 pies a maund?

Mr Atkins—On that year which was a good year. I am afraid it would be very much higher this year because of the shortage of rain.

President—I think in your Samastipur costs you have debited to the Samastipur account a small sum.

Mr Shakespear—To Doulatpur.

Dr Matthar—I think the reference is to the balance sheet of Samastipur where there is a loss entered on Doulatpur accounts as Rs 1,724.

Mr Shakespear—Yes.

Dr Matthar—How do you estimate the loss?

Mr Shakespear—We give the Doulatpur concern (Mr Atkins) the same rate that he would get if he was an independent grower. We also pay him the royalty that he would get if he was an independent grower.

President—If he could not land it at that price you show it as a loss?

Mr Shakespear—Yes. The Royalty is half an anna a maund.

President—You were saying that this 5 annas 6 pies doesn't include loading charges.

Mr Atkins—No.

President—What do they come to?

Mr. Noel Deeri —A pie a maund actual loading

Mr. Shakespear —There is the freight from Doulatpur to Samastipur which is 6 pies

Dr. Matthai —Isn't that included in 5 annas 6 pies?

Mr. Atkins —No

Mr. Shakespear —He has nothing to do with the cane after he has put it into the railway wagons

President —Have you added your terminal charges?

Mr. Shakespear —No

President —You have got your unloading charges?

Mr. Shakespear —We have a wagon charge up to a certain mileage on the carrying capacity of the wagon

President —When the wagon arrives at the destination, who unloads it?

Mr. Shakespear —The factory does

President —Is that charged against your raw material?

Mr. Shakespear —Yes

President —To this you have to add one pie for loading, another pie for unloading and half an anna?

Mr. Shakespear —8 pies. Towards the end of the season you must also add an anna for possible dayage

President —Samastipur is fairly well situated so far as the cost of carriage is concerned but some of the other companies have to pay a great deal more?

Mr. Shakespear —Yes. We have very little local cane coming by cart

President —What do you think would be a figure to take for the cartage taking all the factories together?

Mr. Shakespear —Do you mean to import generally?

President —Yes. Would it be one anna or 1½ annas?

Mr. Shakespear —We allow cartage to all our Samastipur growers. We allow one pie per maund per mile

Mr. Noel Deeri —At one factory, Champaran, in 1928-29 the transport charges came to 57 annas per 100 maunds or 57 annas per maund. Samastipur comes to much more—1 13 annas per maund

President —I suppose west of the Gandak the charges would be much higher

Mr. Shakespear —We pay cartage charges at the Maikowiah factory. We pay cartage charges to all our buyers. Other people adopt a flat rate at the railway station

President —Some of these factories bring their canes from places 80 miles distant by rail?

Mr. Shakespear —Yes

President —The delivery charges must be pretty heavy

Mr. Shakespear —Yes, in some cases they are very uneconomical and as you possibly know in crises they are hauling cane past two factories

Dr. Matthai —Apart from the cane that you grow in the Doulatpur Estate and send to Samastipur, is any used for distribution of seed?

Mr. Atkins —Yes

Dr. Matthai —What proportion is it? This 35,000 maunds, is that for factory seed?

Mr. Atkins —That is used in the estate itself

Dr. Matthai —Tenants' seed—8, 120

Mr. Shakespear —That you get paid for

Dr. Matthai —At what rate?

Mr. Shakespear —At the factory rate

Dr. Matthai —The seed canes are charged a slightly higher price?

Mr. Shakespeare —Yes. The seed cane is delivered with the leaves on.

Mr. Atkins —We leave it open to the raiyat whether he strips it or not. He generally doesn't strip it and takes it away very carefully. If he does strip he does it very carefully himself and loads it.

President —What do they do with the leaves?

Mr. Atkins —They take them away as fodder.

Dr. Matthan —In Samastipur I find you get a larger proportion of Coimbatore canes than in any of your other factories. The total percentage is 89 per cent in the case of Samastipur. All these private growers from whom you buy cane for Samastipur, do they get seed from the Doulatpur Estate?

Mr. Atkins —To the extent of their demand.

Dr. Matthan —I am trying to discover whether the quantity of seed that you show here as tenants' seeds—8,000 and odd—would account for all the Coimbatore canes received at the factory less the cane grown on your estate.

Mr. Atkins —The amount of seed used by tenants in my area would amount to the same quantity as I use myself, 35,000 maunds of which I supply 8,000 maunds.

Dr. Matthan —To what extent is the Doulatpur Estate serving as a centre for the propagation of improved cane in the area?

Mr. Shakespeare —Now they have got their own reserve of seed cane.

Mr. Atkins —If they want anything special or if they see that their cane is deteriorating and would like a fresh stock of seed they come to me. That is the amount—approximately 8,500 maunds which is distributed every year.

President —I observe in the Champuan factory's detailed accounts you have a charge of Rs. 4,000 for propaganda. What does that represent exactly?

Mr. Noel Deerr —We actually gave out free seeds to get it started.

President —What principle do you adopt in giving your free seed? Is there any application made by people?

Mr. Shakespeare —They sign a bond to deliver their crop.

President —Is that a non-recurring charge?

Mr. Shakespeare —We have stopped supplying free seed now. Where I am, we gave out 20,000 maunds last year.

President —Is that paid for?

Mr. Shakespeare —Yes, but next year they will go on with their own seed.

Dr. Matthan —Apart from the sale of improved seeds, is there any kind of demonstration undertaken by you or by your staff?

Mr. Atkins —We occasionally get people out from Pusa from time to time and they come and show us the improved methods of sowing and introduce new varieties of Coimbatore cane and that serves as an advertisement to the local community. They all see and come to know about it.

President —Have you been handicapped at all in the way of propaganda of cane in the past by the difficulties of finance?

Mr. Shakespeare —Yes. We were faced with the prospect of Coimbatore cane work shutting down altogether at Pusa during the days of financial stress with the Government of India.

President —When was that?

Mr. Shakespeare —Not very long after the Inchcape Commission came out. If we had not come to the assistance of Mr. Wynne Sayer, that work would have been shut down. We carried him over the time until the question was reconsidered.

Dr Matthai —I notice in the general proposals that you make in your communication to us, you say that provincial Governments ought to be helped by the Central Government out of the proceeds of the protective duty

Mr Shakespear —Yes, some portion

Dr Matthai —In order to extend the demonstration work?

Mr Shakespear —I fully believe in that

Dr Matthai —Is that kind of work more effective when it is done by the factories themselves rather than by provincial Governments? I am trying to visualise what you may be doing in that direction in the Doulatpur concern

Mr Shakespear —We can do a lot within the limits of our staff and organisation

Dr Matthai —Supposing as the result of my scheme that we may propose, the Imperial Council of Agricultural Research is going to get a fairly large sum to be placed at its disposal for development it would be a satisfactory arrangement under that scheme if part of the funds were granted in the form of subsidies to factories? That is to say the result of their research would be embodied in local practice if factories were also interested in the thing?

Mr Atkins —Yes

Mr Shakespear —We also want the official organisation to go on. We can reach a certain radius but we can't go so very far afield. Our Managers and Assistants can't spare the time

Dr Matthai —Is for the possibility of using improved cranes for the sugar factories is concerned?

Mr Shakespear —We are doing everything we can. We are supplying seed rice. Thousands of rupees have been spent on this alone. Other companies also have spent money on seed. We are supplying oil cake as a fertilizer. We are giving out this season where I am over 20 000 maunds of oil cake to the raiyats as manure in the shape of an advance. They write out a bond and the cost of the manure is charged against the bond. They therefore don't have to pay anything in cash at a time when they find difficulty in finding money

President —It is part of the satta?

Mr Shakespear —Yes

President —The difficulty in the suggestion of yours is that the Central Government should subsidize the provincial Governments out of the proceeds from the sugar duty. Financial rules would appear to stand in the way of the Central Government spending funds on subjects which are transferred to the provinces such as Agriculture

Mr Shakespear —Has the Central Government got the machinery available for this work?

President —No, it hasn't

Mr Shakespear —I want to carry it down to practical demonstration for the benefit of the general sower. In the areas concerned they have not got the necessary organisation. I am talking of the body to whom this money may be voted. They have not got the organisation

President —What about the Imperial Council?

Mr Shakespear —They have not got an organisation in the form in which I would like to see it

President —They have power to make grants to provincial departments

Dr Matthai —I understand they have made a grant for the starting of an agricultural sub station at Karnal in the Punjab

Mr Shakespear —I don't think as an industry we care what machinery is employed as long as we get a staff, a much greater staff, than they now have devoted to this work of popularising cane cultivation and coming,

and explaining matters to the men who are actually sowing. We have a very large demand for our tractors. People are coming and asking us to plough their fields knowing the value of deep tillage. They are very keen on learning.

President—It has been suggested that possibly the various sugar factories and sugar companies might themselves form an organisation for carrying on this work of demonstration. I understand that the main difficulty in the way is that the factories do not know who would benefit by the results of their efforts. They are frightened that new factories might come in and reap the benefit of their efforts.

Mr. Shakespear—That is true.

President—We were told by the Secretary of the Sugar Technologists Association at Allahabad that an effort had been made to organise some sort of Association of cane factories for the purpose of both propaganda and distribution and supplies of cane.

Mr. Noel Decir—No.

Mr. Shakespear—We were asked by the Agricultural Commission (Mr. Noel Decir and myself) why we didn't do more for the cane growing side of the industry and why we did not have cane growers as members of our Association? We answered that we had no money to do any work in that connection as an Association.

President—It is a question of finance mainly, is it not?

Mr. Shakespear—We had a Sugar Producers' Association years ago and it was on the point of being dissolved half a dozen times. It has however been kept up and it has grown into an important body.

President—The question of distribution of cane has been taken up several times?

Mr. Shakespear—The Association had considered it, but we had no money.

Mr. Noel Decir—If all the cane growers could unite and assent to a tax per mound of sugar made and if that could be used for general propaganda without jealousy between different factories, I believe great advantage would accrue to the industry as a whole.

President—You would suggest a small cess?

Mr. Shakespear—Mr. Noel Decir suggests taxing ourselves. We went up to the Government of India with that proposal.

President—What happened?

Mr. Shakespear—They drew up a bill and Government went ahead. Afterwards the Government of India changed their opinion.

Dr. Matthai—How long ago was this?

Mr. Shakespear—Five or six years ago I suppose.

President—What Department of the Government of India dealt with it?

Mr. Shakespear—The Department of Agriculture, Health and Lands dealt with it. It was at the time when Dr. Clouston was here. A bill was drafted.

President—What was the objection to the draft?

Mr. Shakespear—We had no objection to the draft. As I said the Government of India changed its opinion about Coimbatore and the value of the work done by the Sugar Bureau and then we said "please don't tax us."

President—Probably as a result of the Incherpe Committee?

Mr. Shakespear—Yes. The Government of India said that they could not go on with the work.

President—Mr. Noel Decir's idea seems to be that if protection was given on a fairly liberal scale, allowing for all possible contingencies, the industry would probably be in a position to consent to a small cess.

Mr Noel Deerr —I think it would. Personally I would support that attitude that a certain proportion of the increased profits which we would obtain from protection should be set aside for development and research.

President —To be conducted by an Association?

Mr Noel Deerr —Yes, if an Association could be formed.

President —If a cess was made compulsory in that way, there would be few members of the sugar industry who would not be anxious to join your Association.

Mr Noel Deerr —They all ought to be anxious to join, but I am afraid that a number of landless members of the Association would adopt a dog in the manger policy.

Mr Shakespear —Some concerns have paid no attention to developing their own cane supplies. They have not paid a farthing as advances to their ryots and in fact have done nothing.

President —But if they are forced to pay a cess they would be anxious to see that the money was properly spent.

Mr Shakespear —Yes. I suppose so!

President —Would you regard a suggestion for some such legislation as a desirable accompaniment to any protective bill?

Mr Shakespear —Yes, on the same line as the tea cess.

Dr Matthai —But the proceeds of the cess would, in the initial years, have to be supplemented by a grant from Government because in the early years the cess is not likely to amount to much.

Mr Shakespear —I think it should be half an anna a maund of sugar produced.

Dr Matthai —Assuming that?

Mr Shakespear —On 21 lakhs of maunds, it would come to about Rs 65,000 annually and we can do a great deal with that amount.

President —The difficulty is this. In the first few years when you need propaganda most, your funds would be small. Later on when you need propaganda less your funds would be large so that it seems it might be desirable to supplement your Rs 65,000 in the first few years at any rate by a grant from the Imperial Council.

Mr Shakespear —You must have the right organisation to administer the fund. You must have at the head a man who really knows all about it.

President —Would there be any objection to the Imperial Council increasing your Rs 65,000 in the first three or four years?

Mr Shakespear —We can do a lot with even that amount if we have a good man. We would want a central staff. I think the distribution of good seed is one of the most important things because the ordinary grower is frightfully careless. Examine the crop that is left in the corner of his field for seed. It is generally at the edge of the field and is the worst cared for. He has got to be instructed about all that. The supply of good seed is a very important point. What we want is an adequate central staff for instruction purposes.

Mr Noel Deerr —I am afraid Rs 65,000 would not go very far.

President —That is my idea too.

Mr Shakespear —It depends on the men which you are going to spend the money on. I take it that you would only deal with the men from which the subscriptions would come. You need not go down to Madras.

Dr Matthai —As a matter of fact if you confined your activities to the sugarcane area in Bihar and the United Provinces, even then you would find Rs 65,000 too small.

Mr Shakespear —A good deal could be done for that amount.

Dr Matthai —Something could be done. But if you want a big advance, it would not suffice.

Mr Shakespeare — Government might take up land if they wanted head quarters for demonstration work and seed farms. I think in principle it is a very good thing.

Dr Matthai — If you levy a cess on profits at first the cess would be a means of enlisting the interests of the factories. That in principle is the advantage of it. But actually if you want a big advance, the amount that you would get out of the cess would have to be very largely supplemented. Is that not so?

Mr Shakespeare — I think so.

President — In the first few years at any rate?

Mr Shakespeare — Yes.

Mr Noel Deerr — Rs. 65,000 would not go very far. It would have to be definitely increased. I will tell you why. In Java and I believe in Hawaii the expenditure now on work relating to the question we are discussing now is £50,000. But that is raised on one million tons of sugar.

Mr Shakespeare — Do they tax themselves?

Mr Noel Deerr — Yes.

President — Taking the Indian output at about 70,000 tons, as against 1 million tons of sugar there, you would start with a lakh?

Mr Shakespeare — With a lakh a great deal could be done.

President — You can get a move on with that amount?

Mr Shakespeare — Yes.

Dr Matthai — Have you any figures as to the amount spent in a place like Formosa?

Mr Noel Deerr — No. I could find out what is actually spent in Java, Hawaii and the Philippines. They all make contributions towards the technical development of the industry.

Mr Shakespeare — That is voluntary, not a cess.

Mr Noel Deerr — Perfectly voluntary.

President — Would you give us a note on the subject of what is being done in Java, Hawaii, Formosa or any other place which you think would be of interest to us, what is being done in the way of propaganda, what amount of money is spent, and whether it is by voluntary contribution, cess or otherwise?

Mr Noel Deerr — By propaganda you mean development I suppose?

President — Yes, by some central association. At the same time if you could give us your views as to what could be done by a similar organisation in India in the first few years of protection and what do you consider to be a fair sum to start with, we should be grateful.

Mr Noel Deerr — Yes.

Dr Matthai — I may say we attach a great deal of importance to this aspect of the problem for if the sugar industry is going to face competition at any time in the future without a protective duty the big reduction in cost has got to occur in the sugarcane cost of sugar.

Mr Noel Deerr — Yes.

Dr Matthai — As far as other things are concerned, we have made considerable advance. Therefore the whole thing depends on the extent to which you can push forward a scheme for development and research.

Mr Noel Deerr — Yes.

President — You think that that would be of assistance to the industry?

Mr Noel Deerr — Very much so.

Mr Shakespeare — If you want to suggest an actual rate, I can find out for you what was suggested before?

President—If you are going to get support for a bill of that nature, you should not pitch it too high.

Mr. Shakespeare—We consulted everybody and we agreed on the particular rate whatever it was. I think it was half an anna per maund of sugar.

President—Half an anna would not be excessive?

Mr. Shakespeare—No.

President—Mr. Noel Deerr, would you send us that note?

Mr. Noel Deerr—Yes.

President—You were saying this morning that we should consider the question of costs of carbonation and sulphitation factories.

Mr. Noel Deerr—Yes.

President—We have gone at some length into the question of cost of protection of a sulphitation factory. Except in the matter of other raw materials, what alterations do you think would be necessary?

Mr. Noel Deerr—Nothing.

President—In one case it is about 2 annas. In the other case it is about 6 to 7 annas.

Mr. Noel Deerr—In one case it is 61 and in the other it is 12.

President—The difference is about 5 annas.

Mr. Noel Deerr—Yes.

Dr. Matthai—Is there any other item in costs on which you can get a corresponding reduction?

Mr. Noel Deerr—I don't follow the question.

Dr. Matthai—Are you taking the whole cost?

Mr. Noel Deerr—Yes.

President—That additional cost would probably be off-set approximately by the additional price that you would get for your carbonation sugar?

Mr. Shakespeare—More than that.

Mr. Noel Deerr—Carbonation gives 4 per cent more sugar than sulphitation. I don't mean 4 per cent on cane. If a sulphitation factory gives 100 maunds of sugar, the carbonation factory will give 104 maunds of sugar.

President—Is that because less sugar is lost in the filter mud?

Mr. Noel Deerr—It is due to the increase in the purity of the juice—the extra purification of the juice.

Dr. Matthai—It would make no difference to the capital estimate of Rs. 13½ lakhs?

Mr. Noel Deerr—Very little.

Dr. Matthai—So that in fixing the general rate of protective duty for the country, if we proceeded on the costs of a typical sulphitation factory, we should be more or less right?

Mr. Noel Deerr—Yes.

President—How far do you think factories can be established in the Punjab?

Mr. Noel Deerr—The capitalists will have to take the risk of severe loss owing to frost.

President—If you want to eliminate the risk of frost you should, I suppose, establish your factory somewhere in the direction of Rohtak?

Mr. Noel Deerr—Delhi, Karnal and Rohtak really have U. P. conditions and it is in the Northern Punjab that there will be danger.

President—We were told by Sir Jogendra Singh when we went to visit Sonapat that something like 12 factories could be established near Sonapat and these factories could work with fair security so far as frost was concerned.

Mr. Noel Deerr —Yes, in the South East of the Punjab

Dr. Mattha —What is the result of your investigation as far as the working season is concerned? Can you depend on a working season of 120 days in the south east Punjab? I mean, with artificial irrigation could you extend the working season?

President —Why can't they produce the early ripening crop?

Mr. Noel Deerr —Because it is much colder

President —It does not ripen?

Mr. Noel Deerr —No

Mr. Shakespeare —They could preserve the crop later on in the season. We can preserve our crop to the end of May with irrigation

President —If you start crushing your cane in November you would get 5 per cent extraction?

Mr. Noel Deerr —I should say 6 per cent

Mr. Shakespeare —Two years ago at Samastipur we had an extraction in November of over 93 I think

Mr. Noel Deerr —That was an exceptional year with Co 214 cane

President —Do you think there are prospects of the season being lengthened by further development in canalization?

Mr. Noel Deerr —I think I have said something in my note about irrigation

President —Would not that affect the Shahabad district?

Mr. Noel Deerr —Yes. On account of the Sone canals there has been a lot of improvement, if you canalize, both in Gorakhpore and Banar there is ample room for expansion of cane factories. If you tap the Gandak you will be able to irrigate and thereby increase the supply of cane in Saran

President —There is a system of canals in Shahabad. There are prospects there?

Mr. Shakespeare —Wonderful prospects for cane. I should think it is one of the richest cane areas in the country

President —There is a factory there on which Mr. Noel Deerr reported?

Mr. Noel Deerr —That was at Buxa, that was uneconomical, absolutely too small

President —Is your firm interested in that area at all?

Mr. Shakespeare —We might be if we get protection

Dr. Mattha —If you are going to get, as you estimate, 50 factories it means about 13 crores of rupees capital. Taking Rs 10 per maund of sugar it would mean 450,000 tons which would mean roughly 13 crores of rupees

Mr. Noel Deerr —Yes

Dr. Mattha —Shri Jogendra Singh made a suggestion to us that in order to get over this difficulty of raising capital it might be provided that a part of the proceeds of the sugar duty should be utilized as a subsidy towards capitalization

Mr. Shakespeare —I don't like that. The rest of the major industries in India are in such a state that I think any amount of capital will be available. I have no doubt of that. In our own case even in these bad times we have been able to pay something to our shareholders

President —If protection was granted to the industry do you consider there will be any difficulty in raising capital?

Mr. Shakespeare —I don't think so. I dare say the London market could be tapped. We have as a matter of fact raised all our capital in India

President —As regards your firm you would probably extend considerably?

Mr. Shakespeare —Certainly

President —And there would be no difficulty in raising capital?

Mr. Shakespear —I don't think so. We have never had any

President —When you speak of the London market do you think it possible that manufacturers from outside India would attempt to establish factories within the tariff wall?

Mr. Shakespear —I don't know. We can have the vision of Java pulling down their factories and putting them up in India, but other producers must go to the wall before Java goes. Then position is so strong. Cuba must I think go first.

Mr. Noel Deerr —I know of one firm in America, they would be quite prepared, after investigation, to put up factories in India and take payment in shares. They are a firm of machinery makers. They have even discussed the subject with me and said that, after investigation they were satisfied they would be prepared to build the plant and take part payment in shares of the company.

Dr. Matthai —There is another general question we have been considering, and that is the question of licensing factories, that is to say if we are going to protect the industry and thereby help its expansion then the danger of overcrowding becomes greater, and I notice from the papers that you have written that you rather agree with the suggestions made by Mr. Wynne Sayer.

Mr. Noel Deerr —Yes. If a scheme could be made out and if the grower of cane could be protected against exploitation by one single factory operating in the district then I quite agree with you. He should be protected against exploitation owing to lack of competition.

Dr. Matthai —To some extent he will be protected automatically by the fact that *gur* can be depended on to offer a sort of set off.

Mr. Noel Deerr —That is so.

Dr. Matthai —The point with which we are really concerned is this. A system of licensing is not going to help the existing sugar factory area in North Bihar, is it?

Mr. Noel Deerr —No.

Dr. Matthai —That problem is not going to be solved by any arrangement we may make for the future.

Mr. Noel Deerr —The existing factories would have to make the best of it.

Dr. Matthai —As far as the future is concerned supposing you had a large factory started in a satisfactory cane area and another factory thought of starting in the same area, if he is a large man who is going to put, say, 15 lakhs of rupees capital, don't you think we can presume that he would make the best investigation as to the availability of cane supply before he launches out?

Mr. Noel Deerr —Yes. If he is to be successful he would.

Dr. Matthai —Taking a practical view of it don't you think he would investigate?

Mr. Noel Deerr —Speaking of myself I certainly would.

Dr. Matthai —The real danger arises from the smaller sized factories?

Mr. Noel Deerr —Possibly.

President —Perhaps the danger arose when very little was known about sugar making in India and Indian firms in particular did not quite realize the importance of having their own cane supply, but now that a good deal more is known about the industry and still more would be known after our report is issued, there may not be the same risk.

Mr. Noel Deerr —There may be less risk because people have learnt a lesson, but I still think there is danger in treating sugar production as a licensed commodity. That is my personal opinion.

President—Your view really is that in order to attempt any sort of protection against Java, Java conditions should be reproduced here as far as possible?

Mr. Shakespear—All sites should be passed by Government, and Java should not be allowed to put up factories in the country.

President—One might take the view that it would be unreasonable even to expect India to emulate Java in the way of costs and it might not be necessary to follow Java methods closely in this country.

Mr. Shakespear—There is a lot to be said for the idea if it could be translated into an Act.

President—If it could ever pass the Legislative Assembly!

Mr. Shakespear—I think the trouble would come afterwards, when we begin to apply the legislation to actual cases. Officers who are concerned with the selection of factory sites would require to be very knowledgeable!

President—Any Legislative Assembly in which agricultural interests were represented to any considerable extent would find great difficulty in passing it.

Mr. Shakespear—Yes. They would see in it an attempt to curtail prices to the grower. It is not a question of any hard and fast boundaries, you could not attempt to tie down any particular factory to a five mile or seven mile radius.

President—The proposal would I suppose resolve itself into something of this nature, that before a factory can be established licences must be obtained from the Deputy Commissioner on very much the same lines as in the case of mining leases, and in the case of prospecting licences, as you know, there is a good deal of dissatisfaction felt.

Mr. Shakespear—In the case of distillery licences they seem to have reached the super-saturation point in the U. P. Roza was the first, we were the second to come in and then licence after licence was issued without a thought of whether the existing distilleries could be satisfied.

President—So that it would not be a state remedy if the power of licensing was entrusted to some Government officers?

Mr. Shakespear—The agricultural element will have to come into it. You will have to consult the Directors of Agriculture. But I think the germ of the idea is a very good one. I mean the zone system.

Mr. Noel Deerr—One difficulty there seems to be that you may have thousands of people competing at one site.

President—You would have to have a system of drawing lots!

Mr. Shakespear—First come first served, provided that he has a lot of capital.

President—The same applies to mining licences. Licences and leases are not given to people unless they prove that they are men of substance.

Mr. Noel Deerr—There will be a number of cases of corruption.

Mr. Shakespear—We have one or two cases that we know of where a concern has established itself without making any effort to develop their local cane supplies.

Mr. Noel Deerr—On the other hand there is the question of unnecessary transport of cane over long distances. I have got figures of that. I think haulage of cane is just twice as large as it need be. (Actually 75 per cent more now.)

President—You mean the cane does not go to the most advantageously situated factories?

Mr. Shakespear—Six agencies are buying cane at one railway station for different concerns. The whole thing could be organized and the cost of railway transport halved.

President—Do you think there is any prospect of any improvement being effected in this direction by means of a cane growers Association?

Mr. Shalespear—We put one of our managers on special duty in this connection we worked and worked and it all broke down because one concern refused to co-operate.

President—Is there any suggested remedy which you can make?

Mr. Noel Deerr—The only suggestion is that railway rolling stock has not been economically employed.

Mr. Shalespear—The only thing that can be accomplished in the way of a practical remedy would be to bring them all under an agreement with severe penalties. If you try to suggest that to them, they would not subscribe I am sure. We would be prepared to put down the money, but I don't think some of them would. If you had not some penalty, when it suited them they would resign the membership of the Association and you would have no weapons left in your hand.

Dr. Matthan—I suppose as a practical scheme in connection with this problem of protection we may leave it out.

Mr. Shalespear—They are free agents. We can only try and persuade them that they are working on wrong lines. If they only spend a relatively small amount of money—we have done it and we know the value—they will come to realize that they can get all the cane they want if they only advance money to the ryots.

Dr. Matthan—The danger is there and no kind of practical scheme can be suggested which would be effective?

Mr. Shalespear—As I told you we have tried it until we were sick of it. This year, although there is an understanding of a common rate at the railway stations, somebody will certainly put it up by half anna, another will then put it up by an anna and a third will put it up by another half anna. At one time a few years ago the rate for cane went up to 14 annas a mound at the end of the season.

Mr. Noel Deerr—For 10 days.

President—It benefits the cultivator.

Mr. Shalespear—It is a very bad thing for the ryot to realize.

Dr. Matthan—Who was the party that benefited—the ryot or the contractor?

Mr. Shalespear—A good portion of it was never given to the ryot. It is well known that the contractor sees to it that the ryot only receives a portion of the rate paid by the factory. They don't like carrying cane until the rabi harvest because then supply of labour is then limited. They have got to get the rabi crop in and the cane harvest overlapping is a very laborious matter for them.

Mr. Noel Deerr—I would like to see the crop finished by 15th April.

Mr. Shalespear—With irrigation available I would like to see the crop finished by the end of May.

(2) Supplementary evidence (abridged) of Mr NOEL DEERR on 1st December, 1930.

Mr Rahimtoola —I should like to ask you a few questions regarding costs. But firstly, are you in favour of protection?

Mr Noel Deerr —Yes, provided protection does not mean stabilisation of inefficiency.

Mr Rahimtoola —Is the Indian industry inefficient?

Mr Noel Deerr —Partly yes, partly no.

Mr Rahimtoola —What remedies do you suggest?

Mr Noel Deerr —Better machinery chiefly.

Mr Rahimtoola —You think that protection by itself will not really assist the industry?

Mr Noel Deerr —I mean that a protective scheme should be so devised as to give factories time to improve and prepare for a time when protection will be removed or reduced.

Mr Rahimtoola —Do you attach great importance to the development and distribution of seedlings?

Mr Noel Deerr —Yes, I do, very great importance. I also think that the seedlings produced at Coimbatore should be properly tried out in other parts of India.

Mr Rahimtoola —Do you agree with Mr Srivastava when he says "the future of the sugar industry in India now depends on improved methods of production and consequently lower prices, and not on higher prices artificially enhanced by protective duties"?

Mr Noel Deerr —I do not wholly agree. I consider that we must have a certain period of time under protection to enable the industry to stand on its own legs.

Mr Rahimtoola —What do you mean exactly by 'efficiency'? Do you attach great importance to extraction?

Mr Noel Deerr —Yes. We should get an extraction of at least 92.5 per cent cane taking in average over a period of five years.

Mr Rahimtoola —I think you have said that Java can bring her price down to Rs 3 and possibly Rs 2-8. Can you give us details of that calculation?

Mr Noel Deerr —Yes. I will send you a note showing my calculations and deductions.

Mr Rahimtoola —What do you think is likely to be the minimum works cost of a modern Indian Factory which you would consider efficient?

Mr Noel Deerr —That will depend upon the price paid for cane.

Mr Rahimtoola —Suppose we take the price of cane at 8 annas?

Mr Noel Deerr —I will reply in writing when I can refer to my notes.

Mr Rahimtoola —Do you consider that the present Calcutta price of Rs 8 1-0 indicates dumping by Java?

Mr Noel Deerr —I believe that a large quantity of Java sugar is sold in Calcutta at less than cost price. But the good factories will not be making a loss. In fact the best factories will still be able to make a profit at the present price.

Mr Rahimtoola —Was the year 1928-29 a good year for profits and sales?

Mr Noel Deerr —I think it was a fair year. If I remember rightly Champaran paid a dividend. Samastipur and Ryam* did not. On the whole I should call it a fair year.

Mr Rahimtoola —Was there keen competition with Java?

Mr Noel Deerr —What I mean is that the price we were able to get was on the whole not a remunerative price. Puntabpoor which has paid dividends fairly regularly is very advantageously situated in many ways especially I think as regards the price of cane.

Mr Rahimtoola —Why are there no Indian Directors or Indian capital in that Company?

Mr Noel Deerr —It is entirely a private company though registered as a public company. It is a family owned concern.

Mr Rahimtoola —How many years will it take for a new factory to be ready to work?

Mr Noel Deerr —It will take 15 months from the time of placing the order for the plant. That will include everything.

Mr Rahimtoola —Is trained labour available in India?

Mr Noel Deerr —Superior staff is available, but not all Indian.

Mr Rahimtoola —Supposing that a number of new factories are started, will the skilled labour be available?

Mr Noel Deerr —It will be available. There may not be enough in India to meet a very rapid development but in time it could be obtained.

Mr Rahimtoola —Should the price of cane be determined by competition or do you recommend that it should be stabilised at a flat rate?

Mr Noel Deerr —I personally should like to see a sliding scale determined by the price of sugar. On the whole I am in favour of a fixed minimum with a half anna increase for every rupee increase in the price of sugar.

Mr Rahimtoola —Are gum prices dependent upon the price of white sugar?

Mr Noel Deerr —I am not prepared to say that they are. There may be a general relationship but the price of gum is largely affected by purely local considerations. But the price a factory must pay for cane is largely dependent upon the price of gum as a grower can readily refuse to supply cane to a factory and turn it into gum instead.

Mr Rahimtoola —Do you expect the price of molasses to fall in the future?

Mr Noel Deerr —I think it will. I consider Rs 1-8 would be a safe price to take for calculations.

Mr Rahimtoola —Is the present revenue duty of Rs 6 per cwt sufficient to protect the Indian Industry?

Mr Noel Deerr —It is sufficient for the present for the most efficient factories but not sufficient to encourage a development of the industry. A duty is required which will allow the factory to pay 8 annas for cane and show a profit. Without committing myself I would suggest an extra Rs 1-8 per cwt.

Mr Rahimtoola —With such a protective duty how many new factories will spring up in India?

Mr Noel Deerr —I think a great many and I do not anticipate any difficulty in finding the capital if protection is given for 15 years.

Mr Rahimtoola —What about the Khandasars?

Mr Noel Deerr —They will undoubtedly benefit and I think both efficient factories and khandasars will develop side by side.

Mr Rahimtoola —I suppose with a further duty the present efficient factories will make handsome profits?

* No Ryam paid 5 per cent

Mr Noel Deerr —I should point out that I think those factories ought to and will pay more for their cane and consequently their profits will not increase in direct proportion to the increase in duty

Mr Rahimtoola —But you say, I think, that at present prices there is an ample supply of cane?

Mr Noel Deerr —Yes, but at present other crops are so unprofitable that the grower is compelled to supply cane

Mr Rahimtoola —Are you in favour of a cess—or an excise duty—on sugar factories?

Mr Noel Deerr —I would be prepared to say that a factory could pay a cess out of profits over and above a profit of 10 per cent

Mr Rahimtoola —Will an enhanced duty assist cultivators also?

Mr Noel Deerr —Yes, I think it will

Mr Rahimtoola —Would you suggest any price that should be fixed for imported sugar at ports?

Mr Noel Deerr —I should say Rs 10 or Rs 10 8

Mr Rahimtoola —You do not think that after 10 or 15 years the industry will be able to stand without protection?

Mr Noel Deerr —I am disinclined to answer that question categorically. Under certain conditions I think it might

President —I suppose in 15 years India will not be able to produce sugar at the same price as Java?

Mr Noel Deerr —No, on account of Java's exceptionally favourable conditions

President —But India might by that time compare favourably with countries other than Java and Cuba?

Mr Noel Deerr —Yes, I certainly think she will

Mr Rahimtoola —Why do you exclude Java and Cuba?

Mr Noel Deerr —Because their climatic conditions and their tropical situation are so exceptionally favourable for sugar cane

Mr Rahimtoola —What kinds of industrial development and propaganda do you recommend?

Mr Noel Deerr —Firstly, the introduction of better agricultural implements through co-operative efforts, secondly, better irrigation, thirdly, supplies of fertilisers also through co-operative efforts

Mr Rahimtoola —Supposing we recommend a grant to assist the industry should it be given to some central board or body or to provincial Governments?

Mr Noel Deerr —I would prefer it to be given to provincial Governments as each Government has different conditions to consider. I would suggest that the research work should be done by a Central body and the actual practical work done by provincial Governments

Mr Rahimtoola —As compared with other countries Indian efficiency is not discouraging?

Mr Noel Deerr —It certainly is not

President —You would say that the scope for reduction of costs on account of increased efficiency in factories is comparatively small, would you not?

Mr Noel Deerr —Yes, I would. The cost of cane is perhaps 60 per cent of the cost of production and the cost of cane is now mostly an agricultural problem. The question of transport and communication is also of importance and the system of land tenure in India plays a large part in limiting the size of factories

Mr Rahimtoola —Do you think that anything that increases the price of sugar will necessarily put more money into the pocket of the cultivator?

Mr. Noul Deen --Yes, I do and I look forward to the time when the cultivator and the factory will work together instead of being antagonistic. They should share in my increased prosperity on the basis of fifty fifty. We in our factories should at once pay more for our cane if sugar were protected and the price went up. The cultivator will know the price of sugar and will at once demand a higher price from any factory which does not offer it. I consider that any factory which took advantage of a low price for you to pay low rates for cane would be extremely short-sighted. The result would certainly be that the grower would give up growing cane.

THE DURBHANGA SUGAR COMPANY, LIMITED

**Oral Evidence of Messrs J. HENRY and J. MACNIVEN, recorded at
Lohat, on Sunday, the 7th December, 1930**

President—Before we start I might explain to you that all the costs of factories that have been submitted to us are being kept confidential. We propose to use them only so far as it is necessary to enable us to form our conclusions. For example we may give the specimen cost of a model factory in India, but we shall not refer to the cost of any particular factory. That is satisfactory to you?

Mr. Henry—Yes.

President—Mr. Henry, you are the Manager?

Mr. Henry—Yes.

President—Mr. Macniven, you are the Assistant Manager and Chief Chemist?

Mr. Macniven—Yes.

President—The Company is a private Company?

Mr. Henry—It is a private Limited Company.

President—Have you any idea of forming a public Company?

Mr. Henry—I don't think either of the parties who hold the shares would do it.

Mr. Matthal—How many shareholders are there?

Mr. Henry—Two.

Mr. Matthal—One of them is an Indian Maharaja?

Mr. Henry—Yes.

President—Who is the other Director?

Mr. Henry—Mr. McNair of Messrs Morgan and Company, Solicitors.

President—Messrs Octavius Steel and Company Limited are the Managing Agents?

Mr. Henry—Yes.

President—You don't grow any cane?

Mr. Henry—Only experimental plots.

President—You have about 15 acres for cane?

Mr. Henry—Yes.

President—That you say is for demonstration and distribution of seeds?

Mr. Henry—Yes.

President—Do you sell your seed to cultivators?

Mr. Henry—We sell the seed at the same price we are paying for the cane at the gate. It really amounts to an exchange.

President—Is there any undertaking from the cultivators that in return for seed they will supply you with cane?

Mr. Henry—It is understood, but it is not laid down in any way.

President—Your rates for cane are about 5½ annas?

Mr. Henry—We have started this season with 5½ annas.

President—They varied from 12 annas in 1920-21 to 5½ annas to 6 annas in 1929-30 and this year it is going to be 5 annas.

Mr. Henry—This year we have started with 5½ annas as in the past two seasons.

President—That 5½ annas is to the cultivator?

Mr. Henry—Yes.

President —It doesn't include any landing charges?

Mr Henry —No That is the actual price of cane paid to the cultivator

President —What do you estimate your haulage charges and miscellaneous expenses in regard to cane?

Mr Henry —The haulage charges and miscellaneous expenses would probably come to about 1½ annas to 2 annas

Dr Matthai —As much as that?

Mr Henry —That includes all the overhead of salaries of staff in the cane department, not for haulage only

Dr Matthai —Actually if a man sold his cane to you delivered at the factory?

Mr Henry —Two-thirds of the cane is delivered at stations up to 60 miles away We pay 5½ annas there

Dr Matthai —If you left the overhead and included only transport, what would it come to?

Mr Henry —The transport probably comes to three quarters of an anna per mound

Dr Matthai —You say "Overhead expenses" What are the other charges?

Mr Henry —My own salary, Jeremiah's salary, upkeep of cars and so on

Dr Matthai —You charge that against cane?

Mr Henry —The cane department was a separate department up till now

President —In your statement of expenditure which you give in your *second reply to the questionnaire, there is one item "cost of cane including transport and other charges"

Mr Henry —That would include cane expenses—my pay and two Assistants' pay, 3 bungalows and all other charges

President —There is an item there "Supervision and establishment"

Mr Henry —The cane department is a watertight compartment The other expenses which you have got there do not include any cane expenses In 1925-26 transport cost 7 pies, on other heads local and Calcutta—1 anna 1 pie That is the whole of my establishment and everything

President —Would your salary for instance be entirely charged to cane?

Mr Henry —Certainly, before the two departments were amalgamated

President —The Manager's pay would be charged to cane?

Mr Henry —They will do that in Calcutta They will charge a proportion of my pay to the mill

President —In the past?

Mr Henry —I had nothing to do with the management of the mill I was purely Cane Manager up to last May

President —Was there another Manager at the mill?

Mr Henry —Yes, Mr Logan was the Manager There were two separate departments

President —Is there a cane Manager?

Mr Henry —I am combining the post

President —Now they will split the salary?

Mr Henry —Yes

Dr Matthai —So that including the transport and the overheads relating to cane, your cane costs here at the factory 7 annas?

Mr Henry —7 64 annas That is the figure I worked it out on cane

* At the request of the Company the figures in this statement are kept confidential

President—That is practically the figure you gave, between 7 annas and 8 annas

Mr. Henry—7 64 annas is what I made it on these statements

Dr. Matthal—In answer to question 10 you give certain figures regarding the cost of cultivation of cane. Is this taken from your own accounts or is it a mere estimate?

Mr. Henry—It is a mere estimate. We probably spend more on a smaller area than the raiyat would

Dr. Matthal—This is your estimate of raiyat's costs?

Mr. Henry—Yes

Dr. Matthal—What is your estimate of the yield?

Mr. Henry—The average yield is 300 maunds an acre with Coimbatore canes. I should call that a fairly good cane. The cane is distinctly good this year

President—Could you give us your opinion as to what the average cost of a cultivator is?

Mr. Henry—On a maund of cane?

President—Yes

Mr. Henry—Between 2 annas 6 pies and 3 annas

Dr. Matthal—This is on unirrigated land?

Mr. Henry—There is no irrigation. Irrigation is almost impossible in this district. It is non-existent except for rice

Dr. Matthal—Is all the cane grown here unirrigated?

Mr. Henry—Yes, 90 per cent

Dr. Matthal—The land is not manured?

Mr. Henry—Only with a certain amount of ashes and cowdung. Most of the cowdung is used as fuel

President—You purchase direct from the raiyat?

Mr. Henry—Yes

President—And not through contractors?

Mr. Henry—No. Every raiyat is paid individually by an European Assistant

President—Supposing we were to base our protection on the assumption that every factory was paying 8 annas a maund of cane at the factory, that is to say, fix such a protective duty as would ensure a price leaving a margin to the factory sufficient to pay cultivators at the rate of 8 annas?

Mr. Henry—May I ask what you would include in that 8 annas—cane and transport?

President—Yes. If that was done, would you have any objection for example to a rule being framed under the Protective Act making it compulsory on factories to publish every fortnight or every week the rates which they were paying for cane?

Mr. Henry—My own opinion is that it would be a good thing to do

President—You pay at the railway station?

Mr. Henry—Yes. We pay the same rate at every railway station. Whatever comes into the mill gate costs us nothing and from far off railway stations it may cost us up to 9½ annas

President—You would have no objection to supply the information?

Mr. Henry—No objection to giving Government our figure.

President—On displaying rates you are giving it a permanent place?

Mr. Henry—I would like it because of the "Rab" dealers. A panic occurred about three weeks ago. My Assistant in a letter said that a rumour was going on, on account of the price having gone down, we were

going to pay only 3 annas I wrote back saying that our rate should be made public as widely as possible

Dr. Matthai—Has that ever happened before?

Mr. Henry—No

Dr. Matthai—The idea being if you deliver your cane to the factory you get a lower price?

Mr. Henry—I don't know who were the authors of it I put it down to semi-congress propaganda and to interested people making use of the political cry

Dr. Matthai—It is an exceptional thing this year?

Mr. Henry—Yes

President—You pay your riyats once a week?

Mr. Henry—Yes Every riyat gets a receipt when the cane is weighed and these receipts are negotiable documents in the bazaar

President—You consider the rate under cane since the war has gone down considerably?

Mr. Henry—It is now going up considerably

President—Since when?

Mr. Henry—Since the beginning of last year 1925-26 was the worst year I think the rate dropped till about 1925-26, 1926-27, 1927-28 and since then there is a tendency to go up

President—Now the price of practically all the cash crops is right down?

Mr. Henry—Yes, yesterday's rates are as follows—

Per maund by 80 sicca

	Rs	A	P
Paddy	2	0	0
Rice	3	5	0
Makai (Maze)	1	5	0
Rahai	3	0	0
Munna	1	8	0
Wheat	3	5	0
Mustard	7	8	0
Khesari	1	4	0
Gram	3	0	0
Goor	3	12	0
Rab	2	8	0

(Madhubani Bazar rate on 5.12.30)

President—Consequently there is a big inducement to cultivators to plant cane?

Mr. Henry—Yes

President—I suppose this is not peculiar to this part of the country and it is pretty well universal all over India

Mr. Henry—Yes

President—So that one would expect a very large increase in the amount of cane grown?

Mr. Henry—Yes

President—Do you think in parts of the country where no cane factories are there to take the surplus cane grown, this will be followed by a slump in the price of gur?

Mr. Henry—It is very difficult to say Gur seems to follow no natural laws It is a most extraordinary thing

Dr. Matthai—What is the price of *gur* this year in your area?

Mr. Henry—Rs. 3-12

Dr. Matthai—Last year?

Mr. Henry—Roughly about the same

Dr. Matthai—What is your experience? In the past has not the price of cane which the raiyat sells to you depended to some extent on the price of *gur*?

Mr. Henry—It has

Dr. Matthai—Supposing the price of *gur* remains the same, then don't you think there would be little alteration in the price of cane?

Mr. Henry—No, because we are already paying a price which is uneconomic. It is impossible for us to pay more and it is also equally impossible for us to get it for less than that.

Dr. Matthai—That is to say the prices of other crops are coming down and it is therefore more to the interest of the raiyat that they grow cane. There are only two uses he can make of cane. He can make *gur* or sell the cane to the sugar factory. Supposing the price of *gur* continues to be the same and there is a demand for it, can there be any change in the price of sugarcane?

Mr. Henry—With the present sugar market as it is I don't think that the price of cane can change at all for the simple reason that the raiyat cannot accept less, and against the price of sugar, at the same time it is impossible for any sugar factory to give more.

President—This price of Rs. 3-12, is that for eating *gur* or refining *gur*?

Mr. Henry—That would be for refining *gur*. I do not know that there is any great distinction in this part of the world. When they make *gur*, generally they make it in the form of *rab*.

President—When you speak of Rs. 3-12, you mean the price of *rab*, don't you?

Mr. Henry—No. *Gur* commands a higher price than *rab*. It will be seen from the statement that I have given you that the *rab* is selling at Rs. 2-8 and *gur* at Rs. 3-12.

Dr. Matthai—If *gur* is sold at Rs. 3-12, that corresponds to a price of somewhere about 5½ annas per maund of cane.

Mr. Henry—The two markets bear no relation to each other. That has been one of our difficulties. The same is the case with molasses if you take the sugar value of the molasses.

Dr. Matthai—Supposing the raiyat instead of selling the cane to you decided to work it into *gur*, he would get Rs. 3-12.

Mr. Henry—For that class of *gur*, you should take 10 to 11 maunds of cane for one maund of *gur*.

President—Take 10 maunds.

Mr. Henry—Yes.

Dr. Matthai—That would be 8 annas.

Mr. Henry—No. It would come to 5½ annas a maund. That would be Rs. 4-7 per maund of *gur*.

President—That only leaves him 5 annas to make *gur*.

Mr. Henry—Yes.

President—That shows that he is not making much *gur*.

Mr. Henry—There is this trickery. The big merchants will send one cart perhaps to 20 villages and pay cash down at the rate of Rs. 4 or 5 per maund and then will pass the word round that that is the price. The fellows put up bullock mills. Then, after a fortnight or so they say that the price has dropped and then there is no one else to take the *rab* made.

President—Is this price of Rs 3 12 considered an abnormally low price as compared with previous years?

Mr Henry—I don't think so. Still, it is lower than I should expect it to be for gum. I should call it a low rate.

President—Has there been any definite tendency towards gum prices falling?

Mr Henry—At the present moment there is not much gum on hand. The riyat who crushes his cane won't crush it in December. He will wait till January. You never get a really definite market rate till January. There is no competition against mills for us because we take all the cane that we can from those who want to clear off their land soon. The competition will really start in January when the riyat begins to crush his cane.

Dr Matthai—Is all your cane transported by cart?

Mr Henry—It is all transported by cart to our weighbridges.

Dr Matthai—Actually to your factory, the bulk of it comes by rail?

Mr Henry—Yes. We get about 11,500 mounds duly direct alongside the carrier by rail and the rest, some 5000 mounds by bullock carts and by my small trolley line.

Dr Matthai—From the point of view of the condition in which the cane is landed at the factory, which form of transport would you prefer, rail or cart? Or is there no difference?

Mr Henry—That involves other questions. Cracking is impossible in the case of some of my cane which comes from 80 miles away.

Dr Matthai—80 miles away?

Mr Henry—Yes, so cracking is impossible.

Dr Matthai—Within what distance could you transport it by cart?

Mr Henry—I have weigh-bridges placed so that no cart has to travel more than 5 or 6 miles. I have a network of weigh-bridges. I have a weigh-bridge almost at every railway station round about.

President—Supposing a cart man came in direct, how far do you think could he transport it without any deterioration taking place in the cane?

Mr Henry—There again there is another question.

President—It is a question of time, is it not?

Mr Henry—Yes. For instance, from tests that have been done it appears that the cane is actually slightly better off from the point of view of purity if it is allowed to lie over for a couple of days or so at the beginning of the season, but in March or at the end of the season the cane begins to go off, if it is not crushed on the day it is cut.

President—What do you think should be taken as a reasonable radius within which a factory would normally get its cane supplies without an considerable deterioration taking place in the cane?

Mr Henry—I should say assuming that the condition of the cane delivered at the weigh-bridges is the same, the cane which comes to me by rail from 80 miles away is in precisely the same state of freshness as any from the nearest railway station because it all comes in the same train.

President—That I see. Supposing there was no rail here at all and you had to get all your supplies by cart?

Mr Henry—Ordinarily I should like to see the cane crushed within 36 hours after it has been cut.

President—Would you say 16 miles, if by cart?

Mr Henry—That would be uneconomical. The cost of carting would be very high, otherwise it would be all right if a man has bullocks and could make the necessary arrangements. It would mean of course two carts because one cart after coming 16 miles cannot go back again.

President—Of course not.

Mr Henry—But the mere fact that the cane will be coming 16 miles in a cart will not affect the factory

Dr Matthai—What is the rail freight on cane?

Mr Henry—It has been increased by 50 per cent by the Bengal and North Western Railway. We pay now 3 annas 9 pies per mile per wagon. They have at the same time a minimum rate of Rs 5 per wagon.

Dr Matthai—How much can you load in a wagon?

Mr Henry—We load roughly 200 maunds per wagon. Up to 21 miles all cane has the same freight because that is the distance for which a minimum rate of Rs 5 per wagon is charged.

Dr Matthai—What was it last year?

Mr Henry—2 annas 6 pies per mile per wagon.

President—Why has it been increased?

Mr Henry—Because of the factories west of the Gandak demanding a large number of wagons and not loading them.

President—The idea is to discourage them using wagons for carrying cane.

Mr Henry—I have heard it said that that was the reason. The trouble the Railway had with the factories west of the Gandak was the reason.

President—It is not so much to discourage

Mr Henry—It is not so much to discourage them exactly but to discourage cane being carried over a long distance passing two or three factories. It does not hit the man in the inside area. If another man comes and rails his cane through another factory over a long distance, the rail freight more or less tends to make everybody buy close to the factory. It hits me with regard to the cane which comes from places round about Sepaul. Otherwise the bulk of our supplies come from inside the minimum rate area.

Dr Matthai—In this area you are working on a zone arrangement?

Mr Henry—Yes.

Dr Matthai—You have your own area?

Mr Henry—Yes.

Dr Matthai—Is it really necessary for you to go as far away as 80 miles?

Mr Henry—It is a question of breaking faith with the cultivators. We had two factories and neither of them were efficient. We found that the only thing to do was to make the Lohat factory really efficient, so we turned it into a really modern factory some two or three years ago and scrapped the other factory at Sepaul. When the latter factory was working, we encouraged the *raiyats* to grow cane. If we did not buy cane from them now, we would not only lose a large amount of cane but would also be breaking faith with those cultivators.

Dr Matthai—If you were in a position to start *de novo* without any of these arrangements that you had to make in connection with the other factory, you could raise all your cane say within a radius of 25 to 30 miles, could you not?

Mr Henry—Not with the present mill of ours and not at the present prices of cane.

Dr Matthai—What is the maximum distance you would have to go?

Mr Henry—Roughly 80 miles.

Dr Matthai—Still?

Mr Henry—Yes. The reason for that is the old Sepaul factory area.

Dr Matthai—Have you any idea? What is the percentage of land under cane in this area?

Mr Henry—I should say that the land up in this district is always divided into Dhami and "Bluth", rice lands and high growing lands.

Speaking only of the cultivable lands, I believe that the rice land is something under two thirds and the Bluth land slightly over one third. I would put the cane area in our immediate neighbourhood at about one third of the "Bluth" land.

Dr. Matthai—That is to say 1/9th of the cultivable land?

Mr. Henry—1/9th or 1/10th of the cultivable land would be under cane each year.

Dr. Matthai—How much of this area is waste?

Mr. Henry—Very, very small.

Dr. Matthai—Does it practically amount to this that you have to day somewhere about 10 per cent of the cultivable land under cane?

Mr. Henry—I should think so. I have not got accurate figures, but I know that the *rayat* usually puts one third of his Bluth land under cane. At the same time I must say I would not like to be bound to these figures.

President—Have you any strong views on the subject of the formation of zones for each factory?

Mr. Henry—I should like to see it but I think it would be extraordinarily difficult to enforce it.

President—In reply to question 11 (b) you suggest that Government farms for the distribution of pure cane seeds should be established. Do you consider this important?

Mr. Henry—Very important. I tried to introduce it with the help of Mr. Henderson. We thought that we had got something started but we failed to secure the land at present. We had a meeting at Samastipur. I am Vice President of the local Union Bank and the Minister the Hon'ble Mr. Jakiuddin was present. The Minister asked me whether the Bank would lease the land as Government had not got money to buy or acquire the land. We agreed on behalf of the Bank that we could lease the land if the Agricultural Department would manage the farm for the Bank and that the Bank would be guaranteed against any loss as long as the management was in the hands of the Agricultural Department. But the actual land could only be had from Daibhanga Raj and so far we have failed to get it.

President—You say that the Coimbatore canes show signs of deteriorating?

Mr. Henry—Undoubtedly.

President—Are they becoming more fibrous?

Mr. Henry—I would not say more fibrous but the tonnage per acre is becoming smaller than it was, in the case of 210 and 213. The *rayat* does not get anything like what he got in the first few years.

Dr. Matthai—Is the deterioration very considerable?

Mr. Henry—Very noticeable in the case of 210 and 213.

President—Is that due to the want of selection of seeds?

Mr. Henry—Yes, and bad cultivation and want of proper manuring.

President—So that the *rayat* to get the best results wants to have his seed renewed?

Mr. Henry—At least once in every four years the old seeds should be replaced by entirely new seeds.

President—That would mean a very big seed farm.

Mr. Henry—Yes. I think we said that the ideal farm would have to be very large. But even with 100 acres yearly the improvement would be perceptible because 100 acres grown under high manuring would probably yield 500 maunds of good seed per acre. I think the *rayat* sows 95 maunds of seed per bigha. So 100 acres growing 500 maunds of good seed per acre would give a very considerable area scope for change each year.

President—It would be difficult, would it not, to secure sufficient land to grow 100 acres for seeds?

Mr Henry—In our proposed farm we took 100 acres which would give one third for this purpose

President—Really you want 300 acres

Mr Henry—Yes

President—You want irrigation facilities too I think?

Mr Henry—Certainly. A farm growing 100 acres of cane would certainly have to put up tube wells

President—In order to be certain of your seed, you want to irrigate?

Mr Henry—Yes

President—Would you give us your output of sugar. In answer to question 18 (a) you show a net output per maund of cane?

Mr Henry—That must be a typing error. In my notes I made 9.26 per cent of cane

President—Your working season is about 120 days?

Mr Henry—It used to be that. Now we cannot hope to run 120 days. For instance I am hoping to get between 17 and 18 lakhs of maunds of cane. I should work that off in 100 days. If I got 18 lakhs of maunds of cane this year—it would be a very good year if I got that—it would not take more than 100 days to work that off

President—Really you have not got full supplies of cane?

Mr Henry—No. I should put the capacity of our factory at 23 lakhs of maunds. With present prices we cannot get that quantity

Dr Matthai—Have you got sufficient boiling house capacity and milling capacity for 23 lakhs of maunds of cane?

Mr Henry—Yes. We have done 10,000 maunds a day and if you take 120 times 10,000, allowing for a few days at the beginning and at the tail end, it would come to 23 lakhs maunds

President—Has anything been done in the way of getting early ripening varieties of cane?

Mr Henry—Our difficulty was dealing with the small ryots. We introduced Co. 211 and they would not look at it. It grows very early and it cost them a lot of money to strip

President—It gives quite a good tonnage, does it not?

Mr Henry—Yes, but it is a very difficult cane to deal with

President—What about extending the season at the other end? I suppose there you are up against the prejudice of the cultivator and the harvesting of the rabi crop?

Mr Henry—We ordinarily work right through the rabi cutting season. It is owing to the drizzle on the field that the ryot does not like a longer season. If we have the season up to May the ryots by the end of March or beginning of April get frightened that their cane will not be taken

President—Do you work in April at all?

Mr Henry—Yes, in the past we have. Last year we finished on the 20th March. This year we will finish probably at the end of March

President—What sort of working season should we take for your factory?

Mr Henry—Say 1st December to 15th April

President—That is about 120 days

Mr Henry—You may allow counting holidays 25 days a month ordinarily

President—Say 115 days roughly?

Mr Henry—Yes

Dr Matthai—Is all the cane that you crush now Coimbatore cane?

Mr Henry—I should say 97 per cent is Coimbatore cane

Dr Matthai—How do you account for the big difference in extraction between 1927-28 and 1928-29? In 1928-29 your extraction was 8.19 per cent?

Mr Henry—That was the first year with the new mill and when we worked that part of the mill was not ready and that is the explanation of the bad year

Dr Matthai—It had nothing to do with the cane?

Mr Henry—No. It was entirely due to the fact that we had just put in the new plant. Our factory was an 8 roller mill and we made it a 14 roller mill

Dr Matthai—That is to say you put in two three roller mills

Mr Henry—Yes. We put in two more units and the factory was not ready in time and there were numerous breakdowns in the new machinery. We were working under great difficulty

President—Your labour you say is recruited almost entirely from the surrounding villages?

Mr Henry—Practically entirely

President—You have no housing arrangement for your labour?

Mr Henry—They prefer to go to their own homes

President—But you have cooly lines for a few?

Mr Henry—Yes

President—And these are for people who come from long distances?

Mr Henry—Few ordinary labourers come from long distances. We have lines for factory hands but the floating labour practically entirely go to their own homes. We have about 30 or 40 houses for men who do not want to go to their homes

Dr Matthai—What is the strength of your permanent staff?

Mr Henry—That depends entirely on the work we have to do in the off season

Dr Matthai—In the working season you employ about 600 to 700 men?

Mr Henry—We have three shifts of 250 men per shift, that would be 750 men

Dr Matthai—If you strike an average for the year would you say that about 50 would be permanent?

Mr Henry—Many more. In the off season we employ more than 150 men daily. We put in new boilers or alter the factory. We are always trying to bring the factory up to date and the number of men employed would depend on the amount of work to be done

Dr Matthai—Have you sufficient housing accommodation for 100 people?

Mr Henry—No. They live in surrounding villages and they prefer to go home

Dr Matthai—I mean for the permanent staff?

Mr Henry—They also live in the villages near by. We have pucca houses for office staff and technical staff

President—Your rates of pay are fairly low?

Mr Henry—Yes, I suppose compared with some other factories. The ordinary unskilled cooly gets Rs 8 8 0 per month

President—Some of the factories are paying as much as 11 rupees a month to the cane coolies?

Mr Henry—What exactly do you mean by cane coolies?

President—I imagine people handling the cane and so on

Mr Henry—That is entirely above the local rates

President—What do you call 'Cooly mate' exactly?

Mr Henry—There is a man in charge of say a dozen coolies, say a foreman cooly

President—Your expenditure on fuel is very high here?

Mr Henry—It is, but we hope we will cure that by putting in a new boiler this year

President—It is 8 annas a maund of sugar

Mr Henry—5 per cent on cane, that will be 5 maunds of coal to 100 maunds of cane. It is far too high. We hope we would be able to cure that. The reason for this high rate was that we required to work four Babcock and Wilcox boilers, and as we had only four, one was never off for cleaning. We now have five.

Dr Matthai—What do you expect to bring it down to now?

Mr Henry—To about 1 per cent.

President—Say per maund of sugar produced less than an anna?

Mr Henry—Yes.

President—I suppose in course of time you would expect to be in a position to do without any fuel, that is to say work entirely by bagasse?

Mr Henry—Yes. We have strong hopes of reducing the coal bill enormously this season.

President—Mr Macniven, as an expert on the subject, would you consider it a reasonable proposition to expect that if adequate protection is given, in the course of the next 10 or 15 years, factories which are working up to a fair efficiency should be able to provide their own fuel from bagasse entirely?

Mr Macniven—Yes.

President—That is the result which might be expected?

Mr Macniven—Yes. We will require about 200 maunds of coal for starting, that is all we may need.

President—That is 10 tons, so that the incidence per maund of cane would be practically nil?

Mr Macniven—Yes.

President—What are you getting for your sugar? What were you getting last year?

Mr Henry—It was Rs 9 5 0 a maund on the average.

President—At what time of the year was it?

Mr Henry—We sold throughout the year. That is the all over price. We don't keep these figures. The Managing Agents will have them.

President—Where do you sell your sugar?

Mr Henry—The bulk of the sugar is sold in the United Provinces and the Punjab.

Mr Macniven—A very considerable percentage goes to Cawnpur and all round the district.

President—What is the freight from here to Cawnpur?

Mr Macniven—I can't tell you off hand but I believe the freight from Lohat to Cawnpur would be about 10 annas.

President—And the freight from Calcutta to Cawnpur?

Mr Macniven—I do not know that.

President—We have been given the figures of Rs 1 6 0 and Rs 1 4 6, that would be a difference of 9 annas to 10 annas between your freight and the Calcutta freight, so that you actually ought to get 9 or 10 annas more than the Java sugar?

Mr Henry—That is the only pull we have on Java sugar.

President—I suppose the price of Java sugar from November to June averages somewhere about Rs 8 18 0? Is this Rs 9 5 0 the average for both qualities of your sugar?

Mr Henry—Yes, of all sugar sold.

President—What is the difference in price between your first sugar and second quality sugar?

Mr Macniven—4 annas as between our first crushed and our second quality crushed sugar.

Dr Matthai—Your first crushed sugar is above 23 D S?

Mr Macniven — Yes

Dr Matthai — So that that would correspond more or less to imported Java white?

Mr Macniven — It is a little above 23 D S

Dr Matthai — It would be slightly inferior to Java white?

Mr Macniven — Yes. The ordinary Java white is 24 to 25 D S

Dr Matthai — How does your second sugar compare with the first? Do you think it is likely to be below 23 D S?

Mr Macniven — I would say it is

Dr Matthai — What is the polarization of your second sugar?

Mr Macniven — It is 98 4 for the period and to date it is 99 05 (on the report being looked at)

Dr Matthai — What is likely to be the difference in price between your first quality and Java white? Supposing your first quality and Java white were on the market at the same time, then simply on the difference in polarization between the two your sugar is likely to fetch about 1 annas less. Is that correct?

Mr Macniven — I should say No. I would be 1 annas less than Java's best sugar.

Dr Matthai — And your second would be about 4 annas less than the first?

Mr Macniven — It would be about that. Our No. 1 crushed is a mixture of the first and second sugar and it fetches the same price as No. 1 crystal.

Dr Matthai — Your standard quality which is a mixture of your No. 1 and No. 2 would fetch about 4 annas less than Java?

Mr Macniven — Yes

President — And your crystal would sell at about the same price as Java?

Mr Macniven — At 4 annas less. Our No. 1 crystal and our first quality crushed, which is a mixture of the first and second sugars sell at about the same price.

Dr Matthai — I suppose when the crystal sugar is crushed it gets a bit whiter?

Mr Macniven — Yes

Dr Matthai — So that practically in point of appearance your crystal No. 1 and your standard sugar would be more or less the same?

Mr Macniven — Yes, in whiteness.

Dr Matthai — Supposing in Cawnpur your first standard fetched a price of, say, Rs 9 4 0 or Rs 9 5-0, the corresponding price for Java white would be 4 annas more, if you take the Cawnpur market?

Mr Macniven — It would be about that, but I am not versed in prices, and we do not sell our sugar locally in large quantities, we sell one bag at a time, two bags at another time and so on.

Mr Henry — We do not handle sales in bulk at all.

Dr Matthai — You say your second sugars are for special markets?

Mr Macniven — In some places they like darker sugar and of coarser grain because they think the white sugar may be made with bone charcoal.

President — We have come across cases where factories have been able to sell their second sugar at a higher price than the first owing to this prejudice.

Mr Henry — We do not know.

President — What is your price for molasses?

Mr Henry — Last year it was Rs 2 per maund.

President — What is the reason for the high rate that prevails for molasses now? What is the price this year?

Mr Henry — Rs 2 10 0 per maund.

President—What is the reason for the high rate?

Mr Henry—I cannot give you any explanation

President—You had Rs 286 in 1926-27

Mr Henry—Yes, and down to Rs 186 in the following year

President—Could you give any reason for the high rates prevailing in 1926-27?

Mr Henry—No

President—The import price of molasses is pretty high

Mr Henry—I think the real explanation is the Indian molasses is very largely used for Indian tobacco and things of that sort and the amount of imported molasses does not correspond proportionately to the amount of imported sugar

President—At any rate this high rate you have obtained this year is not merely a local rate

Mr Henry—No

President—It is a rate prevailing all over India

Mr Henry—If molasses is better protected than sugar. That would bear out the argument. I cannot give my figures to support them

President—If we were to take credit for molasses against your cost you would strongly object if in estimating your cost we took such a high figure as Rs 2100. The year before last it was as low as Rs 160, and the year before that it was Rs 196

Mr Henry—It would be difficult to say whether the price would be Rs 1100 next year. If cane growing increased and the area under cane goes up I should say the price of molasses should come down. Whether it will or will not, I do not know, but I suppose it would go down

President—Taking your good years and bad years, if we were to take Rs 180, it would be a fair rate

Mr Henry—I should think Rs 180 would be a fair rate

President—That would not be too low?

Mr Henry—Taking an average on the figures before you, Rs 180 is below the average of the past 10 years

President—We hope to be successful in increasing the number of white sugar factories

Mr Henry—Allowing for increasing the area of cane and encouraging sugar I would not budget if I were putting in my own money for molasses selling at more than Rs 180

President—Supposing we were able to ensure an output of something like half a million tons of white sugar in India, I suppose Rs 180, taking a long view of 15 years, might even further decrease

Mr Henry—Very possibly

President—But a figure of Rs 1 for 15 years would be reasonable to take?

Mr Henry—I should think so. That would be sufficient. I think the exorbitant price for molasses is due to the local demand and there is not enough local product

Dr Matthai—I suppose you are not responsible for the answers to question 11. That is to say you give here a memo of approximate charges on imported Java sugar

Mr Henry—No. I have nothing to do with them. That was compiled by the Managing Agents in Calcutta

Dr Matthai—I find the landing charges and river dues come to Rs 1120 a ton which comes to an anna a maund. That is lower than other figures we have got

Mr Henry—I am not in a position to say anything about them as they have been compiled in Calcutta

President—I suppose you would have difficulty in introducing the carbonation process here. Supposing you were starting a new factory, would you have difficulty in getting your limestone?

Mr Macniven—Dehri-on-Sone is the nearest place.

President—Would it be very expensive to land it here?

Mr Macniven—Take the case of Ryan. It is only 11 miles from here. Then limestone comes from Dehri on Sone.

President—What is the deciding factor in inducing the company to go in for sulphitation?

Mr Macniven—Up to 1925-26 it was lime defecation and we then put in sulphitation.

Dr Matthai—Yours is single sulphitation?

Mr Macniven—Yes.

Dr Matthai—You don't think it is worth while to have double sulphitation?

Mr Macniven—I don't think so.

President—Your extraction has gone up since 1923-24 by nearly 50 per cent. Taking your sucrose content of cane at about the present level, 11.0, what do you think an average factory could work up to in the matter of extraction if protection was granted and if it worked efficiently say in the course of the next 10 or 12 years?

Mr Macniven—9.5.

President—That would be up to Java efficiency?

Mr Macniven—Yes, more or less.

Dr Matthai—Would you be able to get the same extraction as Java even allowing for the difference in sucrose, because the purity of our cane is less than Java?

Mr Macniven—Yes, it is less. In this particular factory I think the purity of juice compares very favourably with Java.

President—When you speak of 9.5 extraction, you are referring to this factory and these supplies of cane?

Mr Macniven—Yes, I am taking 11.0 sucrose content.

President—You get your cane fresher than most of the other factories?

Mr Macniven—We do.

President—Probably this factory is rather better than those factories in point of purity of juice.

Mr Honey—Not very much above the average of the other factories. They all have between 11.2 and 11.7.

President—Taking the average of the factories in Northern India if we took an extraction of 9.1 as the figure to which they ought to be able to work up, given protection for a reasonable number of years, should we be far wrong there?

Mr Macniven—I would rather see it 9.3.

Dr Matthai—Allowing as long a period as 15 years to develop?

Mr Macniven—It depends entirely on the sucrose content of the cane.

Dr Matthai—Assuming our improved varieties more or less preserve their present qualities, that is to say you get an average sucrose content of 11.5 or 11.6 and you improve your milling efficiency and your boiling house efficiency, don't you think—at present you are getting 9.2 and various other factories are getting 9.2—allowing a period of 15 years 9.4 would not be unreasonable?

Mr Macniven—No, I don't think with the same sucrose content in cane as last year.

President—You have not distributed any dividends since 1922. What is the reason? Has it gone to improvements or is there no profit to distribute?

Mr Henry — We don't see the accounts, but I know that it didn't make a profit for several years and in other years the profit was very small. I think they would pay a dividend if they possibly could.

President — You have put back into your block about Rs 10 lakhs.

Mr Henry — Yes.

President — The Income tax Authorities are allowing you 6½ per cent?

Mr Henry — I really know nothing about that. This is furnished by the Managing Agents. They say it should be 80 per cent on motor cars. Motor cars after 7 years have no value.

President — 6½ per cent for machinery and plant is the amount allowed by the Income tax people.

Mr Henry — Yes.

President — Actually it has been represented that 6½ per cent depreciation is too much and that it should be at a lower rate.

Mr Henry — I think our people are very fond of conservative finance.

President — Certain people have suggested 5 per cent for machinery, 2½ per cent on buildings and 15 per cent on electric machinery.

Mr Henry — I am not in a position to criticise these figures at all. They don't come into my province.

President — One point on which stress has been laid is that every sugar factory overhauls its machinery every year and charges for repairs and renewals are rather higher than in other industries, so that possibly the amount allowed for depreciation might be less. That is the view put forward before us but on that you say it is not your province to make any comments.

Mr Henry — No.

Dr Matthai — Taking your machinery here, how long has your machinery lasted leaving out the new mills?

Mr Henry — That is quite an impossible question to answer. I don't think there is a single portion of the factory that we have not touched.

Dr Matthai — Take vacuum pans.

Mr Macniven — We put in a new vacuum pan two years ago. In vacuum pans there is no wear and tear at all.

Dr Matthai — What about the evaporators?

Mr Macniven — Very little there. Tubes may last about 20 years.

Dr Matthai — Take the rollers.

Mr Macniven — Rollers do not last long. They have got to be turned down each year.

Dr Matthai — You could depend on rollers doing their work for about 20 years.

Mr Macniven — No. The shell would have to be renewed frequently within 20 years.

President — You have difficulty with your rollers on account of pieces of non getting in with the cane occasionally?

Mr Henry — We have trouble occasionally with scrapers.

President — It is common to renew rollers from time to time?

Mr Macniven — Yes.

Dr Matthai — That goes into the repairs and renewals account?

Mr Henry — I should think so. That is really a recurring expenditure. Every roller has to be turned down every year and loses a little bit of its diameter.

Dr Matthai — If you do that for rollers and making allowance for repairs and renewals, then 5 per cent depreciation on the machinery and plant would not be too low.

Mr Henry — On these finance questions we are not in a position to give an opinion, because we never see the accounts.

President—You press for a duty which would ensure on the average sugar being sold at the port of entry at not less than Rs. 10 a maund?

Mr. Henry—Yes.

President—At present it is selling at Rs. 8 1 6.

Mr. Henry—Yes.

President—You are really asking for an increase in the duty of about Rs. 2.

Mr. Henry—Of course it is of the utmost important that it should be stable.

President—Can you suggest any method by which any price can remain stable?

Mr. Henry—I mean the duty.

President—By stable you mean what?

Mr. Henry—We should have some guarantee or some knowledge that in ordinary circumstances it would not be removed.

President—What you mean to say is whatever duty is imposed it should be imposed for a definite number of years.

Mr. Henry—Yes in order to let the sugar factories know that they could really start spending some money to make things better. We have fixed a rate of 5% minus for cane. The present price offering in Calcutta is under Rs. 9 for sugar about to be made. If I knew that sugar would sell at Rs. 11 instead of Rs. 9 it would make a lot of difference. We make the sugar in December and January and sell it in March and April. If we didn't know when the duty might be going to be taken off, we would be in a hopeless position.

President—How long do you think it would take to erect and get a factory going? I don't mean to say actually working in the first year but up to nearly a good efficiency. Supposing production was introduced next year and some firm desired to start a sugar factory, how long would it take to work?

Mr. Henry—To work up to the highest efficiency with cane and everything I should not put it at less than 10 years. You mean starting a new area where the natives are not accustomed to growing cane? You mean to take a soil of sugarcane?

President—Take the Shahabad area. There is only one small factory at Buxar factory.

Mr. Henry—I don't think the factory would be at its highest efficiency at less than 12 years.

President—I suppose it would take probably at least two years to get the machinery ordered and start the factory?

Mr. Henry—It would take two years.

President—People often tell us in the various enquiries we have conducted that it would be possible to get a factory started in 18 months or at the most 2 years but we have seen in the last ten years that the managing agents make these rash promises and when it comes to proving them something occurs and they generally are not able to get the factory started within the time stipulated.

Mr. Henry—You have to get your designs out. Then you must allow some time for the order to be sent home. Taking everything into account, I would not like to undertake to get a factory going in less than 2 years.

President—It is not easy to work a factory straightaway?

Mr. Henry—No.

President—Your staff wants a good deal of selection?

Mr. Henry—Undoubtedly. I think that 2 years is an understatement.

President—As regards this statement* of expenditure which you have given us can you tell us exactly what is included under each head?

* At the request of the Company the figures in this statement are kept confidential.

Mr. Henry—I have been in charge of the factory only for a short time. But about the Cane Department figures I can speak with authority.

President—Take the cost of cane. That includes transport I take it.

Mr. Henry—Cane includes cane, transport of cane and cane expenses. Cane is of course the price actually paid to the grower without any deductions of any sort or kind. Cane transport will include the upkeep of the trolley lines, actual haulage and loading charges at the railway stations and freight on wagons. Under cane expenses or charges are included the pay of myself, my assistant and clerks at all railway stations, repairs to buildings and every thing in my Department.

President—Other raw materials you say you have none. What about sulphur?

Mr. Henry—That would come under stores. Other raw materials would be required if you bought and refined gum. Sulphur is not a raw material for our manufacture.

President—You take sulphur as an item falling under stores?

Mr. Henry—Yes.

President—Labour and Stores Account. What do they include in that? Does it include all labour?

Mr. Henry—Labour and Stores account manufacture will be manufacturing charges during the season.

Dr. Matthai—The first item includes the whole cost of the transport right up to the carrier?

Mr. Henry—Everything that the Cane Department spends. The mill takes over the cane from my Department inside the factory gate.

Dr. Matthai—All the handling and all the staff necessary will come under No. 8?

Mr. Henry—Yes.

President—Item No. 3 would include all the labour in the factory including supervision?

Mr. Henry—Yes only during the manufacturing season.

President—Under stores, what do you include?

Mr. Macniven—Tannin, sulphur, oil, etc.

Mr. Henry—We have all sorts of stores such as oil, filter cloth, etc.

President—Power and fuel would include coal and firewood?

Mr. Henry—Yes.

President—What is water, lighting, etc.,? What does that item represent?

Mr. Henry—We have an electric pump in the river. Water charge is also included in it. As regards electric light it must be the expenditure on the electric plant including the pump. All these accounts are made up in Calcutta. We do not see the accounts.

President—That would be the cost of working the electrical plant, fuel charges and so on?

Mr. Henry—Yes.

President—What exactly is included under "supervision establishment etc."?

Mr. Henry—I should take that to mean all the monthly paid superior staff, that is to say the salaries of the Manager, Assistants, clerks, head misters, chemists, panmen, etc.

President—What about head office expenditure? Is that included?

Mr. Henry—I could not tell you that off hand.

President—What about auditors' charges?

Mr. Henry—Calcutta handles that entirely.

Dr Matthai—This statement of costs, does that relate entirely to expenses incurred here?

Mr Henry—No, I think it includes everything

Dr Matthai—You think that this item of "Supervision Establishment, etc." might include the head office expenses incurred in Calcutta? You think it might

Mr Henry—It might I could not say definitely, and it would not be safe to venture an opinion

President—What about packing charges? They seem to be very high Do you do double bagging?

Mr Henry—We did up to this year We are going to do single bagging for the first time this year

President—Since last year, the price of gunny bags has come down?

Mr Henry—Yes

President—We find in other factories the cost of packing per maund of sugar comes to not more than 8 annas

Mr Macniven—Possibly they use single bags

President—Yes

Mr Henry—We are single bagging for the first time this year

President—What is included in the item "Miscellaneous"?

Mr Henry—I could not tell you

President—It might include Directors' fees, managing agents' commission, etc?

Mr Henry—Yes I should think that it includes everything that the Calcutta office spends

President—Apart from this, there is still to be considered depreciation and profit Depreciation is not included here I take it

Mr Henry—I could not say Unless they have included it under miscellaneous, it does not look as though it has been included

President—Anyhow profit has not been included? Profit would come to about a rupee

Mr Henry—No

Dr Matthai—You have not given us the costs for 1929-30

Mr Henry—No The financial year closed on the 31st August and I am not sure whether the accounts are ready and could be given to you

Dr Matthai—Have they not been made up?

Mr Henry—I imagine that they must have been made up We have no information on these points As far as I know they have not been given to the Board of Directors yet

Dr Matthai—I suppose you are not in a position to give us the figures for 1929-30 regarding charges incurred here?

Mr Henry—No I would rather you got them from the Managing Agents But I should think that they would have no objection That is a matter which is entirely in the hands of the Managing Agents

President—The cost is susceptible of a considerable reduction

Mr Henry—We can knock off packing We can knock off coal and fire wood and we hope now with some improved machinery to knock off on the manufacture

President—You mean on efficiency?

Mr Henry—Yes We have put in a bagasse conveyer in the off season which would save us the expenses of 10 coolies a day

Dr Matthai—There would be a considerable reduction under cane cost owing to improved efficiency per maund of sugar?

Mr Henry—Yes. Of course as the cost of cane includes all the charges which I have already told you, the price of cane may remain at $5\frac{1}{2}$ annas. If I can buy 18 lakhs of maunds of cane instead of 11 lakhs, the overhead will be distributed over such a large amount of cane that it will be inside $1\frac{1}{2}$ annas. The headings which I cannot touch in my Department are the price of cane and the transport charges. The only thing I can economise on is the item—Cane expenses. This will come down with a larger amount of cane purchases. I have to pay my Jamadars and clerks all the year round. Therefore the more we buy, the cheaper becomes the overhead per maund.

President—From your costs, you would have to deduct the price which you would get for your molasses?

Mr Henry—Yes, I should either add it on one side or deduct it on the other side. Last season's molasses (about 16,205 maunds) were sold at Rs 2 per maund.

President—That corresponds to 11 annas 5 pies per maund of sugar.

Mr Henry—Yes.

President—The amount of molasses which is turned out by a factory I take it depends first on the quality of the cane?

Mr Macniven—Yes.

President—That would depend on the purity of the juice?

Mr Macniven—Yes, on the purity, on the ratio of brix to sucrose.

President—Apart from that, it would depend on the amount of unknown loss in the course of manufacture?

Mr Macniven—Yes.

President—And also on the loss in the filter mud I suppose?

Mr Macniven—Yes.

Dr Matthai—If you had a case like this, what would happen? You have two classes of cane, the sucrose content in both is the same, viz., 11.6 per cent, but in one case, the glucose content is higher. In that case you might get the same extraction of sugar and more molasses.

Mr Macniven—Yes. If you get more sugar, in that case your efficiency would be higher.

Dr Matthai—You mean efficiency in the sense of extraction of sugar?

Mr Macniven—Yes.

President—Take the case in which the sucrose content of the cane is 11.6 per cent, but in addition to the sucrose content, there is also the glucose content.

Mr Macniven—Yes.

President—That might be rather higher in one case than in the other?

Mr Macniven—Yes, that might be.

President—In the case of cane which had a sucrose content of 11.6 and a fairly high glucose content, it might be possible to extract say 9.2 per cent of sugar and a large amount of molasses, whereas with another cane having a lower glucose content, the amount of molasses would be smaller.

Mr Macniven—That is correct. In the case of a factory with a higher percentage of glucose and with the same amount of sugar, the efficiency would be higher although the quantity of molasses is greater.

President—Why do you say that the efficiency would be higher?

Mr Macniven—The more glucose you have the less sugar you can recover because glucose retards crystallisation of sucrose.

President—In that case would the efficiency of the factory be indicated in any way by figures?

Mr Macniven—In the case of two factories working two canes each containing 11.6 per cent of sugar. In one case the glucose content was greater than in another. Both of them made 9.2 per cent sugar but the factory with a great amount of glucose in the juice would be more efficient.

President—What I mean is this. In your factory registers you never show the percentage of glucose on your cane?

Mr. Macniven—We work on purity.

President—Nowhere in your figures is shown what the glucose content of your cane is?

Mr. Macniven—No.

President—That is really an unknown factor which might possibly affect the output of molasses. Is that correct?

Mr. Macniven—That is correct. When your percentage of glucose is higher, the purity of your juice would be lower.

President—What is the purity of your juice here?

Mr. Macniven—The purity of our first juice is 84.67.

President—What is the purity of your mixed juice?

Mr. Macniven—It is 80.61. The gravity purity is 81.93.

Dr. Matthei—What is your unknown loss?

Mr. Macniven—92 sucrose on cane.

Dr. Matthei—Unknown loss per cent sugar on cane?

Mr. Macniven—Per cent sugar in cane it is 2.69.

Dr. Matthei—And your filter press loss per cent sugar in juice?

Mr. Macniven—1.18.

President—What did you say your percentage of molasses in cane was?

Mr. Macniven—1.11.

President—You are below the Java figure. The average Java figure by the sulphitation process is 3.55.

Mr. Macniven—On the other hand they possibly average more sugar per cent cane.

President—Yes, they do.

Dr. Matthei—Have you got a figure molasses loss per cent sugar in juice?

Mr. Macniven—Yes, 10.72.

President—And your purity of molasses is 32?

Mr. Macniven—Apparent purity is 32.00 and gravity purity is 33.79—one of polarization and the other of sucrose content.

NEW SAVAN SUGAR AND GUR REFINING COMPANY, LIMITED, SIWAN

**Oral Evidence of Mr J H DALE, recorded at Pusa on Wednesday,
the 3rd December, 1930**

President —Mr Dale, what is your position in the New Savan Sugar Company?

Mr Dale —I am the Manager

President —The Managing Agents are Messrs Andrew Yule & Co, Ltd?

Mr Dale —Yes

President —You say in your replies to the questionnaire that you have 5 Directors. Only one of these is an Indian?

Mr Dale —Yes

President —The other four are the members of Messrs Andrew Yule's Firm?

Mr Dale —I believe so

President —What is the name of the Indian Director?

Mr Dale —Sh Onkar Mull Jathra

President —How long have you been in charge of the factory?

Mr Dale —From 1928 season

President —What is the actual capacity of your factory? You say you are turning out 800 maunds per working day. What is the crushing capacity of your factory?

Mr Dale —It depends on the sucrose content of the cane. One bottle-neck is the sugar output end. If the cane has 8 per cent sucrose, we can crush 10 000 maunds a day.

President —That is to say your crushing capacity is limited by your boiling capacity?

Mr Dale —That is right

President —So that your works are not very well balanced?

Mr Dale —They are balanced, because my opinion is that the mill house should always be a bit ahead of the rest of the plant.

President —What is your actual milling capacity?

Mr Dale —11,000 maunds a day

Dr Matthai —You have never worked actually to capacity? Last year, 1929 '30, your output was 83 487 maunds.

Mr Dale —Yes

Dr Matthai —That is about 3,000 tons. You can make about 1 lakh maunds.

Mr Dale —Yes, probably more than that. Last year we were restricted in our cane supplies.

President —There are two restricting factors as regards your factory, first of all the boiling house capacity and secondly the cane supplies?

Mr Dale —Yes

President —As regards cane supplies, how do you obtain supplies? You do not cultivate yourself?

Mr Dale —No

President —Not at all?

Mr Dale —Just a little bit for seeds

President —What is the acreage?

Mr. Dale —We have altogether about 12 acres and we grow as much as we can for seeds

President —What do you do with your sets?

Mr. Dale —We distribute them free

President —With a view to improving cane in the local area?

Mr. Dale —Yes

Dr. Matthai —How many maunds of seeds can you distribute from your own estate?

Mr. Dale —It depends on the area. For one thing we don't nigste. Thus year we will have about 2,400 or 2,500 maunds. It is not a great lot, but it is gradually spreading

President —In distributing your sets, I suppose, you follow the Satta system?

Mr. Dale —No, we don't

President —You have no contracts then with cultivators?

Mr. Dale —No

President —This is purely propaganda with a view to developing the area in your vicinity

Mr. Dale —The man is not tied to us in any way when he accepts the seed. We make sure that he is a grower and he doesn't sell it to some other factory or turn it into gur

Mr. Rahimtoola —That is not in writing. That means you fully trust him

Mr. Dale —Yes. It doesn't matter to whom he supplies. It will gradually spread. It is not a very big item

Mr. Rahimtoola —You have no difficulty in getting your cane supplies?

Mr. Dale —No. My price is the same as the ruling price of other factories. Naturally if another factory will offer more money for the cane when there is a slight shortage of cane, they will take it to that factory

Mr. Rahimtoola —Do I understand there is a kind of competition regarding the price of cane?

Mr. Dale —The competition is very keen

Mr. Rahimtoola —Which are the other factories that compete along with you?

Mr. Dale —The Behar Sugar Works, Pachukhi and the Purnabpore Sugar Concern

Dr. Matthai —How many miles are these three factories from your Factory?

Mr. Dale —The Behar Sugar Works is about five miles and the Purnabpore Sugar Concern 11 miles across country

Dr. Matthai —Are they in Saran District?

Mr. Dale —Yes. Purnabpore goes into the United Provinces just over the border, but most of the cane area is in Saran

President —You obtain your supplies through a contractor?

Mr. Dale —Yes

President —Do you regularly employ the same contractor each year?

Mr. Dale —Yes

President —They supply cane on a commission basis?

Mr. Dale —Yes

President —What is the commission?

Mr. Dale —Rs 1-10 per 100 maunds of cane

Dr. Matthai —That is quarter of an anna per maund

Mr. Dale —A little over

President —Do you take any measures to see that the cultivator actually gets the price you pay for the cane?

Mr. Dale — Yes

President — How do you do that?

Mr. Dale — We keep a register at our contractors' weighbridge and that register is inspected by me. If a man can sign that he has received full payment at so much per maund, he signs. If not, he puts his thumb impression of having received so much money. There may be a chance of fake, but sometimes I check myself. I may be there the whole day. If there are any complaints to be made, they come forward and tell me immediately.

President — On the whole do you get many complaints?

Mr. Dale — The competition is so keen that the contractors dare not cut the price of cane. Nobody would supply him. He would lose the supplies. He cannot cut the weight or the price. Both practices were followed at one time.

President — You think that the cultivator is improving in his comprehension of the situation so far as the payment of cane is concerned?

Mr. Dale — Yes.

President — He is more able to look after his own interest than he was some years ago?

Mr. Dale — I think he is.

President — For example, if we were to propose a protective duty on sugar and were to base the protective duty on the cultivator getting an all round rate for cane of, say, 8 annas delivered at the factory, do you think that the cultivator would become aware of that?

Mr. Dale — Yes.

President — Supposing we put on a duty which would stabilise the price of sugar at Calcutta at Rs. 10 a maund, do you think that the cultivator would realise it?

Mr. Dale — He would know immediately.

Mr. Rahimtoola — How will he come to know?

Mr. Dale — There are people who bring the cane to the factory itself. They cart the cane from a distance of, say, 14 miles to the factory and everybody will know the rate paid by that factory. There can be no getting away from that. We have a European doing nothing else but this.

Mr. Rahimtoola — Our point is this: supposing we fix a price of 8 annas per maund of cane, will the cultivator come to know that he has to get 8 annas and not less at the factory?

Mr. Dale — You suggest that 8 annas will include the carting charges?

Mr. Rahimtoola — Yes.

Mr. Dale — He will get to know, because if a man brings in a cart of cane and if he is paid at 8 annas, everybody will know. You can't buy another cart under 8 annas.

Mr. Rahimtoola — Provided one factory pays a man 8 annas, he comes to know. Supposing the factories do not make an effort to pay him 8 annas, will the cultivator come to know that he is entitled to get 8 annas?

Mr. Dale — Not unless some other step is taken to let him know.

President — The competition is fairly keen?

Mr. Dale — Yes.

President — If the price of sugar was stabilised at say, between Rs. 10 and Rs. 11 at Calcutta, the competition for cane on the assumption that they got their price for sugar would tend to push up the price of cane.

Mr. Dale — It does even now. It takes the price up to 12 annas a maund towards the end of the season.

President — So far as your view is concerned you think that competition would ensure that the cultivator got the advantage of any protective duty which is imposed?

Mr. Dale — Yes, I am sure of it.

Mr. Rahimtoola —In spite of the competition do you think that you can get sufficient supplies of cane to all the other mills?

Mr. Dale —To answer that I have got to take in the other crops. The area under cane has increased very considerably last year. That is the crop that is coming in now. They have got more lands still for cane for the coming year, simply because the *rahi*, *maida* and *paddy* are not of much value to day. They can't pay rent out of that. They won't sell *mackai* (Indian corn) at Rs. 1 a maund. He will think twice before he sells it for a rupee.

Mr. Rahimtoola —Do the three mills working in close proximity to one another get sufficient supplies of cane?

Mr. Dale —Last year was rather a peculiar year. The cane was available to a certain extent but it was spread out over a long period.

Mr. Rahimtoola —So that the price of 12 annas is the average?

Mr. Dale —That is not an average. This is the price at the end of the season. We shut down before that, because it doesn't pay us to work when the price goes up over 8 annas.

Dr. Matthal —Supposing we suggested that a fair price for cane at the factory was 8 annas and we stabilised the price of sugar in such a way that it would be possible for the factories to pay that price. You said that unless there was some other arrangement it would be difficult for the grower to get to know that 8 annas was the price that we have considered fair. Is there any kind of arrangement that you can suggest towards that object? That is to say, supposing, taking the suggestion that we have made with regard to a fair price for cane, the officers of the Agricultural Department told the ryots that on the price of sugar under a protective duty the cultivator might fairly expect to get 8 annas, would that be sufficient?

Mr. Dale —Ample.

Dr. Matthal —You think that the Agricultural Department's officers would be able to acquaint the ryots sufficiently with that fact?

Mr. Dale —They would only have to tell one or two people. If that was done, I would not hesitate a minute at opening the rate at 8 annas to start with.

Dr. Matthal —You would?

Mr. Dale —I would, provided we have a sufficient margin. You fix the price of sugar at such a figure as to give a margin. At the present price of sugar we can't pay 8 annas. If you put the price of sugar at such a price that we can pay 8 annas for the cane, I would undertake to let the men know it immediately.

Dr. Matthal —Supposing it was possible for you to get sufficient supply of cane still at 7 annas, in spite of the rise in the price of sugar, then is there any kind of consideration that would induce you to pay a higher price?

Mr. Dale —Yes, to increase the growth of cane. We want more cane. We want to extend our season.

President —Would your firm have any objection to rules being introduced in connection with the Sugar Protection Act making it compulsory on all sugar factories to post at their gates twice every month the prevailing rates for sugar in Calcutta?

Mr. Dale —No, they would not.

President —They would be prepared to do that?

Mr. Dale —May I have the question again?

President —Would your firm be prepared, in the event of protection being introduced for the sugar industry, to publish by pasting a notice at their gates the price of Java sugar at Calcutta twice every month, say, on the 1st and 15th of each month?

Mr. Dale —There would be no objection to that.

President —You would have no objection?

Mr. Dale —None whatever

President —That would I imagine give sufficient information to the cultivators as to what price they could reasonably expect to get for their cane?

Mr. Dale —Yes

President —At any rate there would be found people to explain to the growers the situation about prices?

Mr. Dale —Most of the cane agents do it themselves because the majority of them know how to read and write. It is to their benefit to get a better price for cane—is good a price as they possibly can—to induce people to grow cane.

Dr. Matthai —Do you think it is desirable to have a sliding scale?

Mr. Dale —For cane you mean?

Dr. Matthai —Yes

Mr. Dale —I think that if you fix the minimum the sliding scale would come with competition.

Dr. Matthai —You would simply fix the minimum and leave the sliding scale to be worked with reference to the competition for cane?

Mr. Dale —Because factories would pay as much as they possibly can for cane. In fact we are paying more than we can afford to for our cane.

Dr. Matthai —You suggest the fixing of 8 annas as the minimum provided the price of sugar was sufficient to enable that payment to be made?

Mr. Dale —That should be fixed in such a way that the grower knows what he is actually going to get. If you could strike the cost of landing cane at the factory and then leave the rest of it for the grower himself, there are other expenses—I am leaving out the Agents' commission and that sort of thing—there are other expenses like Railway freight, cartage, etc. If you are going to add all these charges on top of that, we should want a very high price for sugar.

Dr. Matthai —The eight annas that we suggest is the cost of cane landed at the factory.

Mr. Dale —I think that it would be best if you could fix a rate to the grower.

President —That is impossible. The rate would then vary according to the distance.

Mr. Dale —That would be the look out of the factories to help to increase the cane round about factories.

President —How could we fix an all round rate for one man who is 15 miles away and another man who is only 5 miles away from the factory?

Mr. Dale —We don't differentiate because that man is unfortunate to be that distance away but it is paying him better than other crops to grow that cane and cut it to us. We pay an all round cartage of 1 anna 6 pices per maund of cane if it is coming by bullock cart to help to increase the amount of cane cultivation locally.

President —That I quite understand with regard to your factory. Other factories have different methods.

Mr. Dale —They are all paying cartage.

President —Yes, at different rates. Some of them pay 1 pie per maund per mile.

Mr. Dale —They go to the maximum and stop I am afraid.

Mr. Rahimtoola —Your idea is that we should fix a minimum rate for cane to be paid to the grower apart from other expenses that the factory has to incur over and above the price to the grower?

Mr. Dale —Yes, otherwise the grower would not benefit to the full extent.

Mr. Rahimtoola —What do you think would be sufficient price to induce them to grow cane?

Mr. Dale —Seven annas a maund.

Mr. Rahimtoola — At that place?

Mr. Dale — Whoever it is. I think if sugar was selling at Rs. 10 at the port of entry with seven annas a maund actually to the grower it would pay the factory and the grower handsomely.

President — What are you paying at present?

Mr. Dale — 6 annas 3 pies per maund landed on the carrier in the factory. That is for my local cane.

President — You say that areas of supply are allotted to contractors. Do you draw out a definite area for each contractor?

Mr. Dale — Yes.

President — Do other factories do the same?

Mr. Dale — Yes.

President — You think that in recent years the area under cane has increased round about your factory?

Mr. Dale — It has.

President — Could you give us any idea as to the extent of the increase?

Mr. Dale — In 1927-28 season in Suvarn we had 165,000 maunds of cane by bullock carts, last year, 112,000 maunds by bullock carts and this year we expect to get over 6 lakhs of maunds by bullock carts.

President — So that you think that the area is increasing?

Mr. Dale — Yes, it is. Other factories have also increased their supplies by bullock carts.

President — What is the reason for the increase?

Mr. Dale — It is paying them better than other crops.

President — The reason is the decline in the price of other crops?

Mr. Dale — Yes, certainly this year that is definitely the reason for the cane that will be planted this February.

President — You think that there will be a larger area under cane?

Mr. Dale — Yes. Round our own factory I estimate between 20 and 30 per cent. It is difficult to form an accurate idea but talking to people and from what I have seen of the lands kept back for cane the increase will be between 20 and 30 per cent. in cane.

President — Do you consider that the price of gur has an effect on the price of cane at the factory?

Mr. Dale — It has.

President — The factory has to pay a price for its cane which would make it more profitable to the cultivator to deliver his cane at the factory than to make it into gur?

Mr. Dale — Yes.

President — Is that correct?

Mr. Dale — Yes.

President — As the price of gur varies considerably from year to year and apparently bears no direct relation to the price of sugar your position as regards the supply of cane must be rather precarious. Let me explain it this way. Supposing the price of gur goes up to Rs. 8 a maund, it might pay cultivators to make their cane into gur rather than sell it to you for 6½ annas.

Mr. Dale — Quite. But there is another question. They cannot make all the cane that they are growing in that area into gur because it is only a certain amount that they can crush in the country mills. They have to get the mills and if they don't start off with them and pans for boiling, it takes them a little while to get those mills and pans. They don't have always a full number of mills available.

President — So that the capacity for crushing is a limiting factor on the production of gur?

Mr. Dale —In a highly developed mill where cane has been specialised, I am afraid it is impossible for them to crush all the cane. They will crush a percentage.

President —Unless they introduce oil engines?

Mr. Dale —Quite.

President —I suppose if they had some system of communal crushing or co-operative crushing with oil engines it would be possible for them to turn all their cane into gur?

Mr. Dale —Yes, it would be possible if they had all that.

President —Are there any oil engines in your part of the country?

Mr. Dale —No.

President —You have not noticed any increase in the number of motor crushers?

Mr. Dale —No.

President —Is it correct that most of the cane in your area goes to the sugar mills rather than to the manufacture of gur?

Mr. Dale —Yes.

Dr. Matthai —Has there been any rise in the price of gur recently in your area?

Mr. Dale —There has been. Savan is a very big gur market. Now there is very little gur made in the district. It pays them better, even with a slightly higher price for gur, to bring it into the factory and get finished with it.

Dr. Matthai —That might result in some increase in the price of gur when there is less gur made in the area?

Mr. Dale —That accounts for the increase in the price. I think that they are beginning to realise that if they made a large quantity of gur the price would go down. There are some people who have made gur—I mean some families who made gur for generations. They will not sell their cane to the factories. They still make gur.

Dr. Matthai —But most of the increases in the cultivation of sugarcane that have taken place recently represent increases which would rather go to the sugar factories than to gur manufacture?

Mr. Dale —That is correct.

President —You are not in favour of any system of licensing or the allocation of zones to different factories?

Mr. Dale —We have tried to obtain a zone scheme for two years.

President —When you say "we have tried"?

Mr. Dale —I mean a group of factories—18 factories west of the Gundah.

President —Under the Indian Sugar Producers' Association?

Mr. Dale —Yes. We have tried to arrive at some method of co-operation and zone system but it has fallen through because some of the factories reckon that they cannot get their cane under a zone system. We were in favour of it until we found out that that arrangement would not suit some of the factories. Our feeling is that if it is done by Government we might be penalised in some way. They might give a certain number of miles round the factory where cane has not been grown or where soil is not suitable for cane cultivation.

Dr. Matthai —I think that the factories which it will not suit are the newer factories?

Mr. Dale —No, I don't think so. Take the case of the last factory up there. There are two of them, Laxmiganj and Basti. They have both got ample cane. It would not suit the Behari Sugar Works at Pachukhi. They have a large crushing capacity and they have a very small local area. It would be very difficult to allocate any area to the Pachukhi Factory.

Dr. Matthai —Laxmiganj has got sufficient area round about the factory?

Mr. Dale —Yes

Mr. Matthan —So that it is factories started more recently in areas already occupied who really object to the zone arrangement because they can live only by pinching other people's cane?

Mr. Dale —That is what it boils down to

Mr. Rahimtoola —If after protection is given there is a tendency on the part of the people to start new factories would you recommend any zone system?

Mr. Dale —I would certainly then say that they should get permission to erect a factory, otherwise it is not going to be to anybody's benefit

Mr. Rahimtoola —Then you are in favour of giving license by Government?

Mr. Dale —Provided they don't interfere with the existing factories

Mr. Rahimtoola —How can you prevent it except by legislation?

Mr. Dale —Supposing they did this, supposing they restricted me to say 10 or 15 miles north or south whichever way it is going to be, there would be certainly areas which would not come into any factory zone

Mr. Rahimtoola —I am talking of new factories

Mr. Dale —But then you have to take the old factories into account. They have to get the sites passed as suitable for the erection of factories and an assurance that cane supplies could be had. Even if they were not there, it ought to give ample protection if suitable land, away from old factories, could be had and the cultivators were willing to grow cane if desired

Mr. Rahimtoola —My point is whether you would like any interference on the part of Government or whether you would leave it to individuals to select their own sites for factories?

Mr. Dale —I have not much faith in individual factories. We particularly—Messrs. Andrew Yule & Co.—have tried to arrive at some sort of co-operation or some sort of zone arrangement. Messrs. Begg Sutherland and Company have also tried. So far, it has not been found possible to arrive at a common understanding

President —As regards this difficulty which was pointed out by the Sugar Committee regarding the competition for cane in different areas between various factories by reason of the fact that they are situated too close together, so far as the existing factories are concerned, it has been got over largely by the fact that the area under cane in the vicinity of these factories has increased considerably

Mr. Dale —Yes

President —At present would it be correct to state that the difficulty which was apprehended by the Sugar Committee ten years ago has very largely passed away so far as the existing factories are concerned?

Mr. Dale —That is correct. There is another point to this. If you restricted the factories or cut out competition for cane I don't think your cane area would increase as it has done. It is the competition, it is the keenness to get cane that has induced people to spend money and do their best to get the cane cultivated round about their factories. They paid a better price than they would otherwise have done. All that has been to the growers' benefit

President —So that one might say that the existence of competition on the whole has been a healthy feature so far as the sugar industry is concerned. It may not be satisfactory to individual factories but taking the larger view it has been to the benefit of the country because more sugar cane is produced and more white sugar is manufactured

Mr. Dale —That is right

Mr. Matthan —Within limits?

Mr. Dale —The whole thing is limited

Dr. Matthai —I mean, to a considerable extent competition may result in better prices for the grower and in an extension of the area under sugarcane.

Mr. Dale —Yes.

Dr. Matthai —But of course if it exceeds a certain limit it is likely to be uneconomical.

Mr. Dale —It becomes uneconomical. We would have been working at a loss last season if we had carried on crushing as some of the other factories did. The year before last we stopped crushing when some of the factories were working because the price went up to 14 annas. Last year also we stopped working on the 14th of April whereas we could have gone on to the end of April. It was because the price was uneconomical that we stopped. We could not work at that rate.

President —Let us consider the position which may occur if a considerable number of new factories were started. We understand that to purchase the necessary plant and to construct a factory on up-to-date lines it would cost approximately Rs. 13½ lakhs which is a considerable sum. Remembering that the capitalists establishing sugar factories in the future will have before them the experience of the past and will know that the location of a new factory in close proximity to existing factories may result in disaster both for themselves and for the old factories, do you consider that capitalists would take care to see that their factories are erected in areas which are not already overcrowded?

Mr. Dale —I will give you one instance. Year before last the Laxmigung factory was built. That was in 1927 and very close to Padrauna and Tamkoni. They were local people and they knew that cane was there. It did not stop them from building although they were only 9 miles from the other factory.

President —But they had supplies?

Mr. Dale —Yes.

President —They knew the local conditions?

Mr. Dale —Yes but the temptation is to go more to areas where factories are and where the cane cultivation has increased than elsewhere.

Dr. Matthai —Laxmigung is a very large factory?

Mr. Dale —250 ton factory, but they crush considerably more.

Dr. Matthai —They are local people. If they had realised that there was not enough cane supply for both Laxmigung and Padrauna then I suppose the Laxmigung people before they invested their money in that factory, would probably have considered the situation very carefully.

Mr. Dale —That was one example. They knew what they were doing and that there was enough cane supply. The other example is Pachukhi. The Savan factory is only 7 miles by road from Pachukhi. There was also a factory which had been partially built at Mahmurgung. It might be completed and operated as it is being now done, and yet they put the factory in between the two.

Dr. Matthai —That was because when the people who started the new factory came there they did not know that there was not enough cane supply.

Mr. Dale —Simply because Pachukhi was a *gun bazar*, they thought they could get their cane to come into the factory. That was a factory with a large crushing capacity.

Dr. Matthai —The factory is not working now, is it?

Mr. Dale —It is working now.

President —Have they been able to work their factory?

Mr. Dale —Yes. But it has put up their cane cost considerably as they have to go a long distance for their cane. They have brought in a good deal of competition which has been to the good of the grower but it has been fairly disastrous for us with the low price of sugar.

Dr. Matthai—Do you think there is a case for introducing any kind of restriction by legislation?

Mr. Dale—Do you mean on the price?

Dr. Matthai—Restriction on competition.

Mr. Dale—Personally I think if you cut out competition you cut out all inducement to certain factories to help the grower or give the grower a fair deal.

President—So that you think that the interests of the grower are the determining factor and that therefore in his interests no attempt should be made to restrict the establishment of factories, that is what it comes to?

Mr. Dale—It should be left to common sense. Factories already established will have an advantage to a certain extent if new factories were to establish themselves in the vicinity of factories already established, because until the area under cane increases, new factories will have to go further afield and pay more for their cane.

President—In the absence of competition from imported sugar the fact that competition for cane supplies exists is perhaps a good feature from this point of view that it will tend to make all factories take every step possible to increase their efficiency?

Mr. Dale—It has done so.

President—Would you attribute the increase in efficiency of factories in the last six or seven years partly at any rate to the fact that there has been considerable competition for cane?

Mr. Dale—Yes.

President—So that from that point of view it is an advantage for the country as a whole?

Mr. Dale—So long as there is competition and the price of sugar allows you to compete for that cane, I think it is a big asset to the industry.

President—I notice that the efficiency of some factories where competition is keen is quite high whereas in other factories where there is no competition they are attempting to crush a larger amount of cane and getting a smaller return. In fact it closely resembles the difference in efficiency between Java and Cuba. In Cuba they crush in large quantities without getting the same amount of mill efficiency.

Mr. Dale—Yes.

Mr. Rahmtoola—This competition tends to produce more sugarcane?

Mr. Dale—Certainly. It brings him a better price. After all it is money that the ryot wants and if the cane crop is going to pay him better than any other crop he is going to grow it. Leaving out the ryot, it keeps employed a large number of carters. They make their livelihood out of it.

Mr. Rahmtoola—My point was that if the competition was keen and if there was sufficient supply of cane then it was all right, otherwise it would be disastrous to the factories if sufficient supply was not available to three or four factories and if there was no zone system and the price of cane went up and they found that they were losing money?

Mr. Dale—It will take a year or two for things to adjust themselves.

Mr. Rahmtoola—That is why I asked whether competition, I mean healthy competition, will lead to more production of cane.

Mr. Dale—It does.

President—Do you think there is a future for refining from gur?

Mr. Dale—I don't think so.

President—The reason being I suppose that the price of gur is not in close relation to the price of sugar—you may have a higher price for gur when the price of sugar is low—so that so far as India is concerned assuming that there is a high duty on imported sugar—whether revenue or protective—there is no future for the refining industry as such?

Mr Dale —I don't think so. Frankly I think the days of the refining industry are finished in India.

President —Your present extraction is about 8.68 per cent of sugar per 100 maunds of cane?

Mr Dale —Yes.

President —Your extraction has improved considerably?

Mr Dale —Yes, from 6 it has gone on improving, from the days that the factory was built during the war. All the machinery was bought second-hand in Java and put in here. We have gradually changed the machinery, we are still changing and we have still more changes to make.

President —Still your extraction is rather low.

Mr Dale —It is, compared to some of the other factories. We are hoping this year to finish up just over 9 per cent with the improvements we have made and we will keep on improving till we make it up. It is all a question of money.

President —There is one point which rather puzzles me. Your extraction of sugar is 8.68 and your extraction of molasses is nearly 3.99. I should have thought that with a low extraction of sugar your molasses would be higher?

Mr Dale —We are working on better cane, that is of higher purity, and that gives you less molasses.

President —That is a question of the purity of juice really?

Mr Dale —That is right. The quantity of molasses you get depends on the purity of the juice.

Dr Matthai —What is the kind of cane you used?

Mr Dale —The cane was fresher.

Dr Matthai —Have you got your average purity here?

Mr Dale —No. I have given the sucrose content. The average purity for the last season was running to about 80 per cent. That is higher than they ever had in Saigon before.

Dr Matthai —Have you any idea of the average purity in the factories in that area?

Mr Dale —80 per cent is a very good average. I suppose about 78 per cent would be the average there.

President —Would you consider 4.5 per cent extraction of molasses a very unusually high extraction?

Mr Dale —It is high.

President —The milling efficiency of a mill which obtained an extraction of that amount would I suppose probably be rather higher than yours?

Mr Dale —Yes.

President —How many rollers have you got in your mill?

Mr Dale —We have four 3 roller mills and one of the new Shredders.

President —Supposing you had a 17 roller mill your milling would be better and you might also expect a higher amount of molasses turned out?

Mr Dale —I don't think so. That would depend on how fresh your cane was.

President —Would your juice be as pure if you were extracting more juice from the same amount of cane?

Mr Dale —You might take out a little more gum from the cane.

President —You would be actually extracting by your improved milling efficiency not only more sugar but more other substances?

Mr Dale —We would.

President —So that to that extent your extraction of molasses would go up. I am asking you this question because we found on examining the case of other factories with 14 or 17 rollers that their extraction of molasses was considerably higher.

Mr Dale —I would put that down to then using stalk cane

Dr Matthai —When you said 80 per cent as the purity were you thinking of mixed cane juice?

Mr Dale —No, first juice

President —What has been your extraction in previous years?

Mr Dale —Very much lower, 55 and during periods it ran up to 6 per cent

President —So that last year was rather an exceptional one you got exceptionally good cane and exceptionally high purity of juice?

Mr Dale —Yes not only that but we had better efficiency in the boiling house

President —Could you give us any idea as to the amount of the sucrose in your molasses?

Mr Dale —I can send you a note on it immediately I get back. They are running at 36 per cent purity in the average

Dr Matthai —That is the purity of molasses?

Mr Dale —Yes

Dr Matthai —That is to say the sucrose in the molasses compared with the total solid content of the molasses?

Mr Dale —It depends on the density—the brix—of the molasses

President —At any rate so far as this particular figure is concerned the year may be regarded as rather exceptional and in previous years your molasses has varied from 14 per cent to about 6 per cent?

Mr Dale —That is right

President —The sucrose content of your cane was rather high last year?

Mr Dale —It was high

President —I see that in a number of mills the sucrose content is about 11 per cent on the average and you must have averaged very close to 12 per cent

Mr Dale —That was when we got our cane at their best. Our average was about 11.45 last year for the whole season

President —This extraction of sugar and molasses, is that the average?

Mr Dale —Yes

President —You say 25 per cent of the cane crushed is Coimbatore cane. Is that percentage increasing year by year?

Mr Dale —Yes. It has increased this year very considerably

President —Which of the Coimbatore canes constitute the greater proportion?

Mr Dale —The first place is taken by Co 205, then comes Co 213

Dr Matthai —The fibre is more in Co 205, is it not?

President —Did you hear of the tendency for the fibre to increase?

Mr Dale —I have heard people say so but I have not noticed it yet, but we are looking out for it

President —You find you are able to drive your mills mainly on bagasse?

Mr Dale —Yes

President —You have a certain amount of fuel in addition?

Mr Dale —We have, but that is chiefly used when we shut down for cleaning and restart our boilers

Dr Matthai —Your working season is five months?

Mr Dale —It was 140 days last year

Dr Matthai —When did you start?

Mr Dale —We started on the 29th or 30th November I think

Dr Matthai —And then you continued?

Mr Dale —Till the 15th of April

Dr. Matthai — Can you extend the season any further?

Mr. Dale — We started on the 15th of November this year.

Dr. Matthai — How did you manage it? Did you have any early ripening variety?

Mr. Dale — No. We took the cane as it came in and it will pay overhead expenses.

President — As regards the price of *gur* you say that the changes in the areas under sugarcane affect the price of *gur* very little.

Mr. Dale — Very little indeed.

President — That is in your own area?

Mr. Dale — Yes. I am talking of what I know definitely.

President — The reason being that most of the cane goes to the factories and *gur* is made by people who for reasons of conservatism would continue to make *gur*?

Mr. Dale — That is right.

President — As regards climatic conditions, you do not attach very much importance to that?

Mr. Dale — One year comes out very much as another.

President — You put the variations in the price of *gur* as mainly owing to competition from imported *gur*?

Mr. Dale — I think that is what it is.

President — From the figures it appears that the price of imported sugar may come down and the price of *gur* may go up.

Mr. Dale — Conservative people do not want imported *gur*.

President — I do not quite follow why you say the price of *gur* largely depends on the price of imported sugar. I can understand that as far as the refinery is concerned if the price of sugar is low the refinery would pay less for its *gur* but I don't understand as regards the ordinary market for *gur*.

Mr. Dale — People who use sugar manufactured in India are not very keen on buying imported sugar because they think there is animal charcoal in it. They would rather buy *gur*, if the price of Indian made sugar goes up. The imported sugar comes in generally when the mill sugar is over. Take Savan or Pachrukhi for instance. While we have our sugar for sale there is no Java sugar coming into Savan. We have to keep our prices at the Calcutta rate plus freight and we sell as far as we can locally.

Dr. Matthai — When the Indian crushing season begins, say about the end of November, that is the time when *gur* comes into the market, you think the price of imported sugar would tend to be lower?

Mr. Dale — Yes, and that will drop the price of *gur* wherever their own sugar is available because the price of imported sugar is low. It will keep its price down to a certain extent while the Indian made sugar is available but when the Indian made sugar is finished then price goes up.

President — That is to say the class of people who use Indian sugar would use *gur*, so that it is the price of Indian made sugar which affects the price of *gur*?

Mr. Dale — No. There is not enough Indian made sugar.

Dr. Matthai — The price that you realise for your sugar contains a certain element which is really the advantage that you get because you are Indian sugar, that is to say Java sugar was selling in your area at somewhere about Rs. 9 then you are likely to get a slight premium over that because your sugar is sentimentally preferred by the public.

Mr. Dale — Yes. We would perhaps get 2 annas, but the dealer makes it.

Mr. Rahimtoola — Do I understand that the imported sugar does not come to your market until your sugar is over?

Mr. Dale — That is correct.

Mr. Rahimtoola —Then why is it that your sugar should be based on the price of imported sugar at the port *plus* freight?

Mr. Dale —Because if we are any dearer, they would bring their sugar and pass it off as ours.

Mr. Rahimtoola —I don't understand where the sentiment comes in, if you say that if you raise the price of yours a little more than the price at the port *plus* the freight your sugar will go out and the imported sugar will come in.

Mr. Dale —Because the retail buyer doesn't know it. The man who is buying wholesale from the port or a large dealer knows that it is Java sugar, but the man who takes away a bag to sell in a village doesn't know.

Mr. Rahimtoola —To the man who takes away a bag to the village, you can charge more than the price at which sugar is sold at the port *plus* the freight?

Mr. Dale —If he knows he will pay.

Mr. Rahimtoola —He would prefer paying 2 annas more for that than for the imported sugar?

Mr. Dale —Our empty bags printed with our own factory name are very often filled with Java sugar.

President —The position is this: when you are producing sugar the fact that your sugar is available to those conservative classes of people who prefer Indian made sugar and Indian *gur* depresses the price of *gur* to some extent and later on when your sugar is not available to them the price of *gur* rises.

Mr. Dale —It does. I am talking purely of the local market.

Dr. Matthai —You are speaking of the effect of sugar on *gur* in your local market over a short season?

Mr. Dale —I don't think it is a short season. Take the normal output. We manufacture a certain amount of sugar. Some is sold in Lucknow and some in Cawnpore.

Dr. Matthai —If you take a year, you find that there are ups and downs in the price of *gur*. The ups and downs in the price of *gur* during the year to some extent are determined by the availability of Indian sugar.

Mr. Dale —And of *gur* itself. I see what you mean. If there was a plentiful supply of *gur*, no sugar would affect the price of *gur*.

Dr. Matthai —Take the average price of *gur* in one year and the average price of sugar for the same year, take 5 different years in that way—would you be able to say that taking the period of 5 years the variation in the average price of *gur* and the variation in the average price of sugar over that period would correspond? Most of the figures that we have seen so far seem to indicate a different conclusion. But I quite see your point that taking the year and various periods during the year the ups and downs might to some extent depend on the supplies of local sugar.

Mr. Dale —You have got the sugar prices that we realised from 1925 to 1930. The price of *gur* last year varied between Rs. 4.8 and Rs. 6 and the price of sugar we realised all round was Rs. 9.28.

Dr. Matthai —In most of the figures that we have seen during the past three years the price of sugar has steadily fallen. In most of those years the price of *gur* has steadily risen.

Mr. Dale —Yes.

Dr. Matthai —That is taking a period of years which of course doesn't bear out the conclusion that one depends on the other.

Mr. Dale —Quite.

President —Labour is agricultural labour?

Mr. Dale —Mainly.

President —A certain skeleton staff so to speak is engaged for the whole year?

Mr. Dale — Between 90 and 100 men permanently employed

President — And the remaining 500 are drawn from the villages during the busy season?

Mr. Dale — Yes

President — You had no difficulty in getting that labour

Mr. Dale — No 90 per cent of the seasonal labour come each year. The same men come back to the same job

President — Your wages I presume are approximately the same as wages paid by other factories?

Mr. Dale — They are about the same

President — Has there been any increase in the wages in recent years?

Mr. Dale — Considerable increase. Labour was plentiful and we have made several increases in wages

President — Could you give us any idea of what the increase has been during the last five years?

Mr. Dale — I should say 20 per cent all round. That would be a conservative estimate

President — You say the freight from Calcutta to Cawnpore is Rs 1-4-6 per maund. What is that based on? Did you obtain that from the railways?

Mr. Dale — That is the proper figure

President — We understand that the rate from Calcutta to Cawnpore is Rs 1-6. Does your figure of Rs 1-4-6 include terminal charges?

Mr. Dale — It might not

President — There are generally terminal charges

Mr. Dale — Yes

Mr. Rahimtoola — Will you tell me why you have got so low a figure of Rs 1-15 for molasses in 1929-30?

Mr. Dale — That was a good price

Mr. Rahimtoola — I find the other factories are getting Rs 2-4

Mr. Dale — Personally I don't know of any. The average is from Rs 1-9 to Rs 1-11

Mr. Rahimtoola — For this area this is the best price?

Mr. Dale — I think so

President — Just in your own vicinity?

Mr. Dale — Yes

President — Could you give me any idea as to why the price of molasses had risen recently?

Mr. Dale — That is because of the Trust in Calcutta. They have practically the monopoly of Java imports. After the factories have sold molasses, they raise the rate

President — Does the imported molasses compete directly with your molasses?

Mr. Dale — Yes, the price is regulated

President — Your molasses is used for what purpose?

Mr. Dale — It is difficult to say. Most of it is sent down to Bengal and Eastern Bengal from our factory

President — You obtained some high rates for molasses in 1926-27?

Mr. Dale — Yes

President — Was there any particular reason for the high rates in those years? There was no corner in those years

Mr. Dale — Buying and selling molasses is a highly speculative business and speculators have in the past been prepared to offer high rates for the season's output, providing a high security deposit was not demanded

In the event of a fall in the value of molasses these speculators are likely to abscond, or refuse to honour their contract, and as a result we now make a practice of demanding a high deposit to cover ourselves in the event of a drop in the value of molasses. Consequently speculators are not prepared to offer such a high price for the molasses.

President—The prices of molasses vary considerably from year to year?

Mr. Dale—Yes.

President—If a larger number of new factories were started—at present the output of Indian sugar factories is below 100,000 tons, if that was raised to 100,000 tons, there would be a corresponding increase of molasses?

Mr. Dale—Yes.

President—Do you consider that that would affect the price that you get for molasses supposing the output was quadrupled?

Mr. Dale—It would depend on the quantity imported from Java.

President—Does the Java molasses go upcountry?

Mr. Dale—Yes it does occasionally. They are sending as far as Bhagalpore in tank wagons. They are running it on the other side where they have broad gauge tank wagons and they make use of that for sending molasses all over the place.

President—You naturally endeavour to sell your molasses locally as far as possible?

Mr. Dale—Yes.

President—If you had three other new factories competing with you for the molasses, the price is likely to go down.

Mr. Dale—It would go down.

Dr. Matthai—This price that you give here for sugar realised, is the average price realised for the different qualities?

Mr. Dale—Yes.

Dr. Matthai—What is the difference between the first quality and the second quality?

Mr. Dale—That again varies almost from month to month. Most of the time last year it was about 8 annas.

Dr. Matthai—Does your first quality fetch the same price as Java white? Is there any difference between Java white and your first quality?

Mr. Dale—A difference of two annas either way. It depends on the market. We may charge two annas more or they may charge two annas more. If we are selling outside our own area, we get two annas a maund less.

Dr. Matthai—If you sell in areas where there is no sentimental preference for Indian sugar, you would probably fetch two annas less.

Mr. Dale—Yes.

President—These prices that you give here, are they at the factory?

Mr. Dale—Yes, and the price of Java sugar, of course, includes cost of freight from Calcutta to Savan.

President—You think the main factor determining the size of an economic plant is the amount of sugarcane available?

Mr. Dale—Yes, or likely to be available.

President—Speaking generally what do you say would be the size of an economic unit in India?

Mr. Dale—I don't think it should be smaller than 12,000 maunds of cane a day.

President—It would be about 14 lakhs of maunds a year.

Mr. Dale—Yes. You have the same labour, the same supervising staff for that as you would have for a factory with a crush of 9,000 or 10,000 maunds. You have all that extra to pay with a smaller output. If you

go bigger than 12,000 maunds, you will have to increase your staff for efficiency

President —In any case in India where cane supply is a matter of considerable difficulty, my attempt to establish factories say, on the Cuba scale would be quite impossible?

Mr Dale —It is almost hopeless

Dr Matthai —You have 4 Roller Shredder and 3 roller mills?

Mr Dale —Yes

Dr Matthai —That is 16 rollers

Mr Dale —The 4 roller crusher-shredder consists of a 3 roller mill with an attachment for shredding cane. It cannot be considered a four roller mill. We have thus 12 rollers and one shredding attachment

Dr Matthai —It is less than that

Mr Dale —Yes

President —As regards improvements to your mill, you contemplate the replacement of at least two of the existing mill engines with a new modern engine. That is to say you are going to operate with one engine instead of two?

Mr Dale —Yes

President —How many engines you are working at present?

Mr Dale —3 engines

President —And your intention is to have two engines?

Mr Dale —Yes

President —What other improvements do you think could be made in the plant with sufficient finance?

Mr Dale —We want to improve the centrifugal machines and settling tank capacity and filter presses. They all need increasing for improving the quality of the sugar and getting greater efficiency still

Mr Rahimtoola —You bought three filter presses in 1924

Mr Dale —We may require more

Mr Rahimtoola —You want to add to it?

Mr Dale —Yes

Dr Matthai —Is your process double sulphitation?

Mr Dale —Single

Dr Matthai —That is sulphitation at the juice stage?

Mr Dale —Before settling. We have a plant there for double sulphitation

Dr Matthai —But you have not used it?

Mr Dale —We have tried it without great success and intend making further experiments with this system

Dr Matthai —Why?

Mr Dale —We settle the juice of the cane and press the scums and mud after the clear juice has been decanted. We lose sucrose in the press cake. It is in the syrup stage that the loss is heavier. We would probably improve the quality of the sugar, but we would lose in extraction

Dr Matthai —It would be rather lost in filter mud and not in the molasses?

Mr Dale —It would be lost in the press mud

President —Your block account, I understand amounts to about 9 lakhs and your capital is Rs 11 lakhs?

Mr Dale —Yes

President —You have written off in depreciation about Rs 9 lakhs?

Mr Dale —Yes

President —So that originally your actual block account must have been Rs 18 lakhs

Mr. Dale—No, the block has never amounted to 18 lakhs as new plant has only been gradually installed since the factory started work in 1920

President—Is it financed by means of an overdraft?

Mr. Dale—I think Messrs. Kilburn Company had the Managing Agency before. Since the present Managing Agents took it over block, is represented by plant and machinery, has been written down to replacement cost

President—You have written down your block account by Rs. 9 lakhs but retained your capital intact how has this been accomplished?

Mr. Dale—Partly by temporary borrowing from the Company's Managing Agents, and partly out of profits

President—Unless you have issued debentures

Mr. Dale—There are no debentures

President—The present capital value is approximately the cost of replacement?

Mr. Dale—Yes

President—The block account is no longer excessive?

Mr. Dale—No it is down to its value

Mr. Rahimtoola—When the Company was floated the shares were offered to the public?

Mr. Dale—Yes, I believe so

Mr. Rahimtoola—Therefore when you took over the Managing Agency, the number of Indian shareholders remained the same

Mr. Dale—I think they have increased very considerably since they took it over. I don't think there were many Indian shareholders

Mr. Rahimtoola—You don't offer the shares to the public?

Mr. Dale—No

Mr. Rahimtoola—They have taken the shares at the price in the market?

Mr. Dale—At the market valuation

Mr. Rahimtoola—And was the Indian Director there at the time when Messrs. Kilburn and Company were the Managing Agents?

Mr. Dale—No

Mr. Rahimtoola—You took over an Indian Director?

Mr. Dale—Yes when Andrew Yule's took it over

Mr. Rahimtoola—He has no connection with the Company as such. Is he not an *ex-officio* Director?

Mr. Dale—No

Mr. Rahimtoola—And the other four Directors are *ex-officio* Directors?

Mr. Dale—I could not tell you for certain. I know three of them

Mr. Rahimtoola—Three of them are interested in the Company?

Mr. Dale—Presumably all the Directors are interested in the Company

Mr. Rahimtoola—Whereas the one Indian Director which you have is not?

Mr. Dale—I imagine the Indian Director is quite as much interested as the others

President—When did Messrs. Andrew Yule and Company take over?

Mr. Dale—In 1923

President—Since they took over, you paid dividends on two occasions viz., 1923 and 1924

Mr. Dale—Yes

President—Since 1924 I take it that the profits have been devoted to writing down the capital?

Mr. Dale—Since Messrs. Andrew Yule and Company took over, the full amount allowable in accordance with the Income-tax rules as transferable to depreciation, has been so transferred, whether the profits were sufficient

or otherwise and has been devoted to writing down the book value of the block, although in some years since 1924 losses were incurred on the season's working.

President—In other words, you have been adopting a conservative attitude.

Mr. Dale—We realised that the factory, as it was, was not an efficient unit. It could not exist. It would have had to go. Therefore the money instead of being paid as dividends was put back into the business in the shape of new machinery.

Mr. Rahimtoola—As regards your reply to question 85 what additional capital would be necessary in order to carry out any scheme of replacement, you say that it can be done out of depreciation.

Mr. Dale—Yes.

Mr. Rahimtoola—Therefore you don't wish to employ any further capital.

Mr. Dale—We have enough capital. Rs 11 lakhs is plenty for us so long as our Managing Agents are willing to allow us a very considerable overdraft during the cane purchasing season.

Mr. Rahimtoola—Your capacity can be increased to 10,000 maunds a day?

Mr. Dale—We can crush that now when the sugar in cane is low. But when the sugar in cane increases we have to come down to meet our 800 maunds of sugar per day in the boiling house.

President—Dealing with the costs, it is difficult to see exactly what is included in each of those heads. You have given us the items of costs in great detail at the end. Would you look at the statement which you have given and pick out the items which have been included in Form 11? Item No. 1 is sugarcane. That must include the cost of cane purchased. How is that item made up?

Mr. Dale—Cane purchase, railway freight, cartage, establishment, bonus, commission, loading charges.

President—What establishment is that?

Mr. Dale—That is the establishment at the different weighbridge.

President—Item No. 2 as "other raw materials." That includes Sulphur and Lime.

Mr. Dale—Yes.

President—You don't include under that head such items as oil?

Mr. Dale—No.

President—Or 'Alter Press' cloth?

Mr. Dale—That is not a raw material used in manufacture.

President—Labour. Does that include the first six entries given in the statement?

Mr. Dale—That is right. Then there are these items—European establishment, Indian establishment and European allowance.

Dr. Matthai—Is that all included under labour?

Mr. Dale—No.

Mr. Rahimtoola—Does subordinate staff come under that?

Mr. Dale—No.

President—It includes—wages of manufacturers, wages of fitters, wages of Palladis, wages of Coolies on firewood and coal, wages of Cane carrier coolies, and wages of Bagasse coolies.

Mr. Dale—Yes, under labour.

President—Power and fuel. What are the items under power and fuel?

Mr. Dale—Firewood and coal.

President—Water and lighting, you have no entry for that?

Mr. Dale—No.

President—Is there no loss for that?

Mr. Dale—No. We have tube wells and hand pumps for them. Each man draws his own water and lighting is supplied free. The Indian allowance of Rs. 400 includes kerosene oil and other things that we provide.

President—That comes under wages?

Mr. Dale—It is allowed for them.

President—Where is that charged in your accounts?

Mr. Dale—To Indian allowance, and shown as kerosene.

Dr. Matthai—It would come under labour, would it not?

Mr. Dale—Yes, but it is shown separately because we have to account for that.

President—Supervision office charges and establishment. What are the items for that?

Mr. Dale—This includes all European establishment and allowance and subordinate staff allowances and salary at the factory.

President—Does that include European establishment?

Mr. Dale—Yes.

Dr. Matthai—Has that not been taken under labour?

Mr. Dale—No. European establishment, Indian establishment and subordinate staff come under it.

President—I find on totalling that does not include the Managing Agents' allowance.

Mr. Dale—You are right.

President—Current repairs to buildings.

Mr. Dale—It is all repairs.

President—What about packing?

Mr. Dale—That is gunny bags.

President—Miscellaneous. What is included there? Am I right in thinking that the entries in these forms I and II are not absolutely exhaustive?

Mr. Dale—No. Forms I and II deal only with works cost.

President—For instance they don't tally with your statement at the end.

Mr. Dale—As question 86 of the Questionnaire only asked for Works cost, the forms have been filled up accordingly, but so that there should be no mistake a copy of the complete cost account has been attached to the Questionnaire.

President—These items do not include everything?

Mr. Dale—No.

President—Therefore for your costs we must take the statement at the end?

Mr. Dale—Yes.

President—Your depreciation is not allowed for at the Income tax rates. It is considerably above.

Mr. Dale—Our depreciation is allowed for at the Income tax rates.

Dr. Matthai—At what rate?

Mr. Dale—At the maximum rate allowed.

Dr. Matthai—That is 6½ per cent on machinery.

Mr. Dale—Yes.

President—You say on Electric installation depreciation is charged at 15 per cent. What is the value of that?

Mr. Dale—Income-tax rates provide for depreciation not on the depreciated value, but on the total cost value. As regards electric installation the value of this in our last accounts amounted to Rs. 4,104 on which depreciation amounting to Rs. 615 was written off.

Dr. Matthai—That is to say, calculated at standard rates on your original block value you get Rs 11-10

President—What is the proportion between your output of first and second sugar?

Mr. Dale—Roughly 40 per cent first and 60 second

President—So the average price will be somewhere about Rs 8 13 6?

Mr. Dale—Yes

President—And to get your 10 per cent profit on your present price you would want an increase in the duty of something like 1 rupee? But we have not yet given a credit for molasses

Mr. Dale—Yes. Molasses is not included in that. You can put that down at 10 annas a maund

President—What is this "less credit realised—1 pie"? What is that credit in Form 11?

Mr. Dale—This was a credit realised from the sale of surplus bagasse at the factory

President—If you take your output of molasses 30,000 maunds that is As 14 8 per maund of sugar

Mr. Dale—Taking it from day to day we must be just clearing our expenses paying overhead and all charges because the extraction is low with the cane. The sugar is not ready in the cane yet

President—Taking the average all over season if the price of imported sugar falls any further you would not expect to make a profit this year?

Mr. Dale—I don't think so

President—Why not?

Mr. Dale—We will certainly have to pay more money for our cane and the price of molasses is an important factor, probably it may go down

Dr. Matthai—What is the trend of the market?

Mr. Dale—Downwards

Dr. Matthai—Why have you not sold forward?

Mr. Dale—Last year as soon as the factory sold it the price of molasses went up. It was raised by the Pure Molasses Company. They dropped the rates in Calcutta and when all the factories sold out their stock they put up the price again

Dr. Matthai—So you are holding up your molasses for a better price?

Mr. Dale—Yes, but at the present moment the trend is downwards. That is why I am not selling

Mr. Rahimtoola—You would be able to realise at least 10 annas?

Mr. Dale—I hope so. It has been as low as a rupee a maund for molasses. That gives you only about 6½ annas. The whole factor that comes in here is the cost of cane

Dr. Matthai—You are very nearly paying 8 annas at the factory?

Mr. Dale—Yes, and at 8 annas and Rs 9 it is not possible to make a profit

Dr. Matthai—Even if you paid the rate we were suggesting, namely 8 annas, your costs are not likely to go up much higher than now because you are already paying As 7-8, so that taking your extraction at 8 per cent 8 pies would mean somewhere about 3 annas a maund?

Mr. Dale—Your minimum would be 8 annas. It will not remain at that. The minute there is a slight shortage of cane—it pays factories to pay a little more and keep their factories working to full capacity—people rather than lose their cane supply would pay a bit more because if you are making a smaller quantity of sugar you are increasing the labour charges very considerably

President —Where do you sell your sugar?

Mr Dale —Just now we are selling it locally

President —Last year?

Mr Dale —Cawnpore, Allahabad and locally

President —When you say the average price of sugar at present is somewhere about Rs 8 13 which place do you mean?

Mr Dale —I am talking of sales made at the factory

President —That price you cannot expect to get if you are selling at Cawnpore?

Mr Dale —No

President —You would have to pay freight?

Mr Dale —We would not pay freight but we have to allow the freight it would be the freight on Java sugar from the nearest port of entry at Cawnpore, what the price of Java sugar would be at Cawnpore That governs the rate

President —Let us take the price of Java sugar at Rs 8 16 and allow Rs 16 for freight, that is Rs 9 7 What is the cost of your sugar at Cawnpore?

Mr Dale —Actually the freight from the factory to Cawnpore is Rs 10 8 per maund (at Railway Risk) but we are not aware if this includes terminal charges at Cawnpore

President —That will give you a price at Cawnpore of Rs 8 12

Mr Dale —That is about what it would

Dr Matthai —You would get Rs 8 12 if you sell at Cawnpore?

Mr Dale —Yes

President —Do these costs include commission on sales?

Mr Dale —No, commission on sales is dependent upon the amounts realised, and is therefore not included in the cost account, but is deducted before the realisations are credited

Dr Matthai —Do you include Managing Agency commission in these?

Mr Dale —Managing Agency Allowance, which is a fixed monthly allowance, is included in the cost account, as this is not subject to variation

Dr Matthai —I notice here Agency Allowance Rs 12,000 that is Rs 1,000 a month What is the commission to the Managing Agents? I understand from your replies to the questionnaire that Rs 12,000 is the total expenditure incurred by your Managing Agents on top of that you have to allow the Managing Agents commission on your sale proceeds Is that included in this statement?

Mr Dale —Commission on sale proceeds, as explained above, is not included in the cost account

President —There is one head "Commission" and that is left blank What is that?

Mr Dale —That is commission at the factory

President —Can you tell us whether the Managing Agents' commission was paid last year?

Mr Dale —I cannot tell you for certain

Mr Rahimtoola —What is the meaning of Directors' Commission?

Mr Dale —That I can't tell you either, that is a Calcutta expenditure

President —Should we be able to ascertain that from your Calcutta office?

Mr Dale —Yes

President —You sell in Cawnpore and what other markets?

Mr Dale —At Allahabad

President —What is the freight to Allahabad?

Mr Dale —I think it is 8 annas a maund

President —And where else?

Mr Dale —I can't tell you. The buyers are there, they send despatch instructions all over Northern India. We have Selling Agents at Cawnpore and at Allahabad and they despatch to innumerable places.

President —What is the biggest centre?

Mr Dale —Cawnpore.

President —How does the sale at Cawnpore compare with local sales?

Mr Dale —Very much better. The local market is very much limited. If we sell about 13,000 mounds locally we have done well.

President —Do you consider the present costs will fall?

Mr Dale —I think so.

President —Apart from any reduction in the price of sugar landed at Calcutta do you consider that there are stocks upcountry already existing will affect prices?

Mr Dale —I do not think so. If the prices remain in Calcutta as they are now then the price of sugar will not go below because as far as we are concerned Calcutta is the parity for us.

Mr Rahimtoola —There are no stocks accumulated at the different factories?

Mr Dale —No.

Mr Rahimtoola —And the general practice is that you clear your stocks before people either take to *gur* or imported sugar?

Mr Dale —That is generally the case. In about three months we clear our stocks.

ROSA FACTORY, ROSA.

**Oral Evidence of Messrs E H MARSHALL and R MOODIE,
recorded at Rosa on Tuesday, the 18th November, 1930.**

President—Mr Marshall, what is your position exactly?

Mr Marshall—I am the proprietor of Lyall Marshall and Company who are the Managing Agents of the Rosa Factory

President—What is your position, Mr Moodie?

Mr Moodie—I am the Manager of the Rosa Factory

President—I understand you have about 60 acres of land under cultivation?

Mr Moodie—Yes

President—About a third is under cane?

Mr Moodie—Yes

President—The rotation is cane, wheat, fallow?

Mr Moodie—Sometimes we grow gram after wheat

President—You worked out your cost per maund of cane at 6 annas 8 85 pices?

Mr Moodie—Yes

President—That includes cutting and carting, European and superior Indian staff That accounts practically for the difference between your estimate and Mr Clarke's estimate His is about 4½ annas, but that is for cane on the field and not for cane delivered at the factory

Mr Moodie—Yes

President—Who is in charge of cultivation?

Mr Moodie—Mr Turner is entirely in charge of that

President—Is he a full time man?

Mr Moodie—Yes It is only part of his work That is why we have got to take a proportion of superior Indian staff We also have a zamindari munshi and an assistant clerk They go round, check the times of the ploughmen, coolies working, doing trenching, cultivation of the land, generally preparing the land, all the sowing and weeding as the cane grows up

President—How long have you been cultivating the Coimbatore varieties?

Mr Moodie—Only about 3 or 4 years

President—At present you are growing Co 290?

Mr Moodie—Yes, and Co 281 and Co 214

President—Is there much difference in the outturn of the three?

Mr Moodie—Co 214 is the lowest yielding cane

President—But the earliest kind?

Mr Moodie—It will ripen very early We only got Co 290 and Co 281 from Mr Clarke last spring

Dr Matthai—You have no Co 801?

Mr Moodie—No Mr Clarke has it and he is going to give it us this year

Dr Matthai—You are now cultivating this plot with water from the canal area?

Mr Moodie—Yes

Dr Matthai—That is since two years ago?

Mr Moodie —Yes

Dr Matthai —How that made any difference to your water charges? It is Rs 31?

Mr Moodie —It is much cheaper than we used to be able to do it, because our arrangements for pumping water were not very good. We have a pumping station on the banks of the river down there and our canals at times are up here nearly a mile away and if we are to pump water from the river through the pipes naturally by the time it got up there, there was a very poor flow.

Dr Matthai —Could you give us approximately what the difference is?

Mr Moodie —I should say that our irrigation charges have just been about half.

Dr Matthai —The whole object of your cultivating this cane is to provide setts, I understand?

Mr Moodie —Practically like a demonstration farm. We don't wish to crush it ourselves. We want to sell the cane or give the cane to the people who grow it for us.

Dr Matthai —You are able to distribute all the setts on these 20 acres?

Mr Moodie —We only sold about one-third last year. We charged 8 annas a maund of cane. Mr Clarke charges 12 annas. We sold about 5,000 to 6,000 maunds.

Dr Matthai —That would account for how much cane if you take it at 1/20th?

Mr Moodie —Our total yield was 16,104 maunds out of which we sold about 6,000 maunds and we crushed 10,000 maunds.

Dr Matthai —That would account for about 120,000 maunds of cane on a basis of 1 to 20?

Mr Moodie —I think it is rather high.

Dr Matthai —What is the proportion?

Mr Moodie —We take for ordinary market production if you sow in the flat about 1 to 12. It will take 50 maunds to sow an acre to get 600 maunds out of it.

Dr Matthai —What is the total amount of cane that you crush in a year?

Mr Moodie —Last year we crushed 4½ lakhs of cane.

Dr Matthai —That is to say about ½th was grown from setts provided by your farm?

Mr Moodie —Yes.

Dr Matthai —You sell to these people, but there is no corresponding agreement on their part to sell the cane to you?

Mr Moodie —No.

Dr Matthai —It is simply a business proposition?

Mr Moodie —We are trying really to introduce, exactly the same as the Agricultural Department are doing although we try as far as possible to give it to people who will give us the cane.

President —To whom you have given advances for instance?

Mr Moodie —Yes. We prefer our own ordinary suppliers should have this cane.

Dr Matthai —Is there any special arrangement that you make for demonstration apart from selling these?

Mr Moodie —None at all except that our fields are always open for inspection by the cultivators.

Dr. Matthai—You think that will be quite enough for the purpose of propaganda and demonstration or is there anything more that you as a factory can do?

Mr. Moodie—I don't think there is anything more we can do. They have the Agricultural farm here. There are several private farms. There is one on the other side of the river owned by a Muhammadan gentleman in the city. The increase in the growth of these improved varieties has been a very slow business here, but it is now becoming almost universal.

Dr. Matthai—I notice last year out of the canes crushed about 30 per cent was improved variety. That is to say a very considerable part of the improved varieties that you have purchased must have been grown out of the setts provided from Mr. Clarke's farm.

Mr. Moodie—Yes and also purchased from men who had originally taken up the planting of improved variety. A lot of these people put down Co 213. That is a very popular cane from the riyat's point of view, because it gives a very big yield. We don't like it because it has a very poor sugar yield.

Dr. Matthai—Poor in the sense that it has less sucrose content?

Mr. Moodie—Yes and very late ripening up here. It is a heavy cane and it takes very little trouble to look after. Jackals do not touch it, whereas Co 214 is a lighter cane and is liable to lodge.

President—What about manure? I see you use chemical manure.

Mr. Moodie—Yes, sulphate of ammonia.

President—Do you find that satisfactory?

Mr. Moodie—Yes. We have tried one plot this year with nitrate of soda because the Chilean nitrate man came along and offered to give it free for trial.

President—Don't you use farmyard manure?

Mr. Moodie—We don't have much.

President—What about green manure?

Mr. Moodie—We did use green manure last year, but our results were not so good as Mr. Clarke's. As a matter of fact we take Mr. Clarke's opinion about manuring.

President—In Bombay we were given to understand that chemical manure alone was not very satisfactory. It might to some extent replace farmyard manure, but not to a great extent.

Mr. Moodie—I think sulphate of ammonia with its nitrogen fairly easily assimilable by the soil is a very good manure.

President—That is generally approved by the Irrigation Department?

Mr. Moodie—Yes. The soil here appears to respond very well to it.

President—What about the ordinary cultivator? Does he use sulphate of ammonia?

Mr. Moodie—None of them use it.

President—Do you do anything in the way of extending the use of chemical manure? Do you stock chemical manure?

Mr. Moodie—No. They simply won't pay for it.

President—You have experience of growing the ordinary deshī cane?

Mr. Moodie—We have never actually grown it ourselves except to try and improve the variety.

President—What did you grow before Coimbatore cane?

Mr. Moodie—We never used to do much of our own growing. Before Coimbatore cane there was J 33, the one that was brought by Mr. Clarke, which eventually went out very badly with red rust.

President—How do you think the cost of producing deshī cane compares with this cost? You get your Coimbatore cane at between 6 annas and 7 annas a maund.

Mr. Moodie —If we put the same amount of labour and expense into the thing as we shall probably have to do if we grow it in trenches, the cost would be little less, because the yield would be so much less, the cost per maund would be about the same.

Dr. Matthai —You get a yield of 700 maunds. If you do it on deshi cane, it may be half.

Mr. Moodie —It may be 400 maunds.

President —Would your costs be cut down proportionately?

Mr. Moodie —If we use to plant in trenches, the rent will remain the same, the ploughing will remain the same, the price of seed will practically be the same and chemical manure will not be used. We know from Mr. Clarke's experiment that if we use chemical manure for deshi cane, it reduces the quantity of sucrose content. The sucrose content is always very poor. Irrigation would probably be about the same. Trenching, weeding, cutting and carting and staff would be about the same.

President —You would get 100 maunds at nearly double the price?

Mr. Moodie —Yes. If we use to plant deshi cane, we would not bother about trenching and would do no irrigation.

Dr. Matthai —It would not be worth while to put in deshi cane in this particular area?

Mr. Moodie —No. Our whole idea is to try and get the improved canes. There are only a few special lands in which they always will put down the deshi cane because some of the improved varieties would not stand it.

President —I suppose there is no possible means of judging what the cost of producing deshi cane per acre is because it depends upon the condition of the land, the agricultural practice of a particular cultivator, and all these may be different?

Mr. Moodie —Quite. The individual element comes in here very much. We have down here men with two fields alongside of one another. On one field you get an excellent crop and on the other very poor, because the difference lies in the man himself.

President —Have you any record of the prices of gur?

Mr. Moodie —You mean locally made gur?

President —Yes.

Mr. Moodie —We don't keep any record of prices of gur. We only study it during the cane season simply as a sort of indication as to how our imports of cane will go. We find that when gur is cheap we get a big crop of cane, whereas when it is dear, our imports fall off.

President —What was the level of price last year?

Mr. Moodie —Rs 5 a maund.

President —Would that be eating gur?

Mr. Moodie —Yes.

President —How does that compare with Meerut gur?

Mr. Moodie —It is exactly the same.

President —Might we take Rs 5 as about the level?

Mr. Moodie —Yes.

President —How much of that would be the middleman's commission? It has been suggested that the middleman would take 4 annas as commission.

Mr. Moodie —I should say it is quite reasonable.

President —So the cultivator would get Rs 4-12? From that I suppose we would have to deduct his out of pocket expenses for actually making gur?

Mr. Moodie —Yes and carting into the bazaar.

President —That amounts to 12 annas, hire of pans and so on.

Mr Moodie — They go in for communal pans and mills in the villages. A village will combine and they will crush all their cane. They will take one man's field one day and manufacture *gur*. They will take another man's the next day and so on.

President — They use an oil engine?

Mr Moodie — No, bullock power. They will probably have half a dozen running and that is what they call a *bel*. They sell their *gur* separately and out of their proceeds they pay the rent of these mills, pans and so on.

President — What do they do about cattle?

Mr Moodie — They bring their own cattle for their own crop. They will put their cattle on to the bullock mill while their cane is being crushed. They will have their own women and children to carry the bagasse. They keep everything separate. Each man's lot is kept separate.

President — Supposing a man had an extra amount of cane and his bullocks would not do it within a reasonable time, would he hire the bullocks?

Mr Moodie — He will arrange with the other people whose crop is not so good.

President — Would there not be any difficulty in doing that?

Mr Moodie — I don't think so.

President — Would it be reasonable to take about Rs. 4 as the net value of the cane crop to the cultivator if he is going to make *gur*? What is your opinion?

Mr Moodie — It is more than that.

Dr Matthai — Supposing *gur* is selling at Rs. 5 a maund in this part, what do you think is likely to be the corresponding price of cane per maund?

Mr Moodie — We have been paying 6 annas 6 pies a maund for the past five years for our cane.

Dr Matthai — Most of the time has the price of *gur* been ruling at about Rs. 5?

Mr Moodie — Yes and during those years we have never had a really bumper crop.

Dr Matthai — If you take Rs. 1 as the net price which a cultivator gets?

Mr Moodie — I should think that a bit low. If you are taking the selling price at Rs. 5, there are many things that come in the making of the *gur*. They take the scum off. They don't waste anything. Every mortal portion of the juice is recovered in some form or other. They can get labour for nothing, because they can feed these people on the skimmings and give them a stick to chew. That is the wage for the woman. She brings a *ghumra* and at the end of the day she takes it full of the scum, so that the actual cost of manufacture is limited to the rent of the mill and pans.

Dr Matthai — And any oil they may use for the lamps if they work at night?

Mr Moodie — That is a very small item. They are extremely economical in the use of oil.

Dr Matthai — The hire of these pans seems to vary a good bit. In Bombay for instance it works out to pretty nearly a Re. 1 per maund of *gur*.

Mr Moodie — A mill can be hired here at Rs. 20 for the season. I really could not say what it is this year, but I should think it is cheaper. A great many more are coming in to the market. I saw the other day that the man at the bridge at Shahjahanpur has started to make them. Usually he would pay Rs. 20 and use that for 2½ months.

President That would turn out probably 120 maund

Mr. Mondie Yes

Dr. Matthew I took it if the way I take the price of rice at Rs 1 a maund. You have been paying for rice in practically 100 maund a maund. If you take 10 maund of rice to one maund of rice that means at the price of rice at 10 maund the price of one maund of rice is 10 Rs. Actually the price of rice at 10 Rs. May be 10 Rs. then that the difference between the rice and the maundman rice and the out of pocket expense

Mr. Mondie Anyhow if you put it the way you want it is sufficiently attractive to bring all that rice in to you for the rice making you

Dr. Matthew You rather expect that to cut it to be the equivalent price of rice

Mr. Mondie Yes

Dr. Matthew You are trying to make sure that the rice is not the price of rice

Mr. Mondie Yes we have done that price at 10 Rs. in April. We send our notices round to our suppliers at 10 Rs. and they pay in who brings in improved variety of rice. It is 10 Rs. a maund more

Dr. Matthew Are you considering an export of rice to other places

Mr. Mondie Our average price for the whole year this year will be about 7 annas 3 pice. The average price that I pay for rice is 10 annas here whereby, as you know we are in a position to pay for rice to us and undertake to give it to our customers at 10 annas. It is a great profit for us, we pay him at the rate of 10 annas a maund for a quantity of 6 pice per maund. It might be 10 annas a maund at 10 annas a maund

Dr. Matthew You make advance in April

Mr. Mondie We actually start in June. We start in June showing above the ground

Dr. Matthew That is to say you start to pay for the rice at the village and then he makes this arrangement with the rice dealer to pay for the rice in advance or does he make it direct

Mr. Mondie He does it direct. He knows the village and he knows the rice dealer and if he is doubtful about a new man he asks the village man if he is a safe man to advance money to and the headman will then advise him

Dr. Matthew On what scale do you fix the advance

Mr. Mondie In the old days we considered that an acre higher of land (6 highas make one acre) a man could grow not less than 10 maunds of rice. That was 120 maunds per acre. It was a very conservative estimate. We used to say to the man "If you will write an order for 100 highas of rice we will give you Rs 1 advance per higha"

Dr. Matthew That is Rs 10 to an acre

Mr. Mondie Yes

Dr. Matthew That means Rs 10 per 100 maunds of rice

Mr. Mondie Yes actually for 100 maunds of rice that is the total sum which he contracts to supply and which he must supply

Dr. Matthew Do you make a further advance

Mr. Mondie Yes we make a second advance at the same time

Dr. Matthew That is when you are going to harvest

Mr. Mondie Yes

Dr. Matthew What is the scale of that

Mr. Mondie Rs 1 per higha

Dr. Matthew That would be Rs 21 per acre. Altogether you advance Rs 54 per acre. On that no interest is charged

Mr Moodie —None whatever

Dr Matthai —Practically the interest on that is an addition to the price for cane that you pay?

Mr Moodie —Yes

Dr Matthai —When you make advances in April do you decide on the price?

Mr Moodie —Yes, the price is fixed then

Dr Matthai —The price of *gur* with reference to which the cultivator would demand his price for cane, would be the previous year's *gur*?

Mr Moodie —Yes

Dr Matthai —So that the cane that you get for crushing now is the cane the price of which has been fixed with reference to the previous year's price for cane?

Mr Moodie —Yes

Dr Matthai —So that the cane that you get for crushing now is the cane the price of which has been fixed with reference to the previous year's price of *gur*?

Mr Moodie —Yes

President —What is the total amount of advances you have outstanding in the course of the year?

Mr Moodie —Rs 181,000 roughly

President —If we take 7 per cent interest on that it will be Rs 12,600?

Mr Moodie —That is per annum. Our advance is for 6 months only

President —Take Rs 6,000

Mr Moodie —Yes

President —What is the total cane crushed?

Mr Moodie —4½ lakhs last year. With these advances we have this year already written owing to our increase in price, 560,000 maunds of cane of cane

President —It is about a pie and a half per maund of cane

Dr Matthai —It is quite inconsiderable

Mr Moodie —Yes

President —It would bring up your cost of cane from 6 annas 5½ pies to 6 annas 7 pies

Mr Moodie —Yes

Dr Matthai —I understand that the object in offering a higher price this year is partly to ensure that you get a continuous and sufficient supply?

Mr Moodie —No. The increase in price only applies to improved varieties of cane. The price for *dehlu* cane will remain at As 6½. The price for improved varieties will be 7½ annas

Dr Matthai —In your answer to the questionnaire you make the suggestion that in order to extend your working season beyond the end of February, it would be necessary for you to pay a price which would make it worth while for the grower to allow his cane to stand on the ground a little more. Is the increase in the price that you are offering at present designed for the purpose of getting him to do that?

Mr Moodie —That is one of our reasons for offering the extra anna

Dr Matthai —Are you expecting as a result of 7 annas 3 pies per maund of cane that you will be able to get not merely improved varieties, but also cane for a part of the year after February?

Mr Moodie —Yes

Dr Matthai —Would you be able to do that this year?

Mr Moodie —That is what we are hoping, because there is a very big crop. I don't think they can get it off the land at the end of February

As you know, probably all over India they are extremely conservative. The tradition regarding cane is that none must be cut before *dimak* and none must be cut after *holi*. The *holi* will take place at the end of March next year and a good Hindu should have all the sugarcane crop off the land by then. Also there is a much more material view that they take *is*, that they want money as quickly as possible. Thus you more than ever they are depending on sugarcane to pay off any arrears and naturally they want the money as quickly as possible.

Dr. Matthal — Late in March the cane might get dried?

Mr. Moodie — They look at that also. As we buy by weight the man who leaves his cane standing loses something undoubtedly.

Dr. Matthal — So that if he cuts all his cane before the end of February he will turn it straightaway into *gur* and it doesn't matter for the purpose of making *gur* whether the thing is cut before February or not.

Mr. Moodie — No except of course that he cannot get good quality of *gur* before the 1st of January.

Dr. Matthal — On this increased price to what extent do you expect to be able to increase your working season?

Mr. Moodie — Last year we wrote at the old rates 5 lakhs of maunds. This year with increased rates we have written 8,00,000 maunds.

Dr. Matthal — That would come to you in regular supplies till about the middle of March?

Mr. Moodie — That is what we anticipate.

Dr. Matthal — I understand from your replies that it is part of your agreement that the man agrees to supply his cane at stated periods?

Mr. Moodie — No, we regulate the imports of cane.

Dr. Matthal — The agreement is simply that the man should give a certain quantity of cane.

Mr. Moodie — There is no time specified at all, but we have explained to the cane suppliers that they must all bring it in in proportion to the quantity that they have written to us. The man who has written a small amount, say 30 maunds, for one *bigha* will be allowed to bring only one cart in one week. In two weeks he will finish that 30 maunds.

Dr. Matthal — It is simply a matter of persuasion?

Mr. Moodie — Not only that but compulsion in a way. We will not allow a man to enter the factory unless he has the ticket which we issue previously. We issue weekly tickets marked Monday, Tuesday, Wednesday, Thursday, Friday and Saturday and the man must bring his Monday's ticket on Monday. If he brings it on Tuesday, we don't accept it, because it will upset all our arrangements. That is what we have been drilling into them for years past and they are now quite in line with them. I should think practically we are almost the only factory in India that can regulate its supply of cane.

Dr. Matthal — Your working season at present is restricted to about 60 days?

Mr. Moodie — Yes.

Dr. Matthal — But there are several factories in India which have a much longer season.

Mr. Moodie — Yes. For instance like Bihar. They are running nearly to the month of May. You will never see a stick of cane on the land in May here.

Dr. Matthal — What is the difference between this area and that?

Mr. Moodie — The climate.

Dr. Matthal — Is it entirely a question of climate?

Mr. Moodie — Yes.

Dr. Matthai—Apart from this tradition that canes have got to be cut by a particular time, supposing it was not so cut and was allowed to stand in the ground would the cane deteriorate?

Mr. Moodie—Yes. After the end of March the cane up here would deteriorate very rapidly and the sucrose will invert back again into glucose.

Dr. Matthai—So that whatever arrangements you make, it is impossible for you to get your working season extended beyond the middle of March?

Mr. Moodie—We might run on the deteriorating cane up to the end of March. Even then it might pay us, because we have a very heavy overhead which we carry over to the beginning of the season. The bigger the quantity of sugar we can produce the lower is the incidence charge per maund of sugar.

Dr. Matthai—Therefore even with a slight reduction in the sucrose content it would be worth while for you for the sake of economies in overheads to push your working season right to the end of March?

Mr. Moodie—Yes, just as we have got to start with unripe cane.

Dr. Matthai—Supposing you had Co. 214 on a fairly considerable scale could you start your working season much earlier than now?

Mr. Moodie—Yes. We could start by the middle of November. This year we propose starting on 15th December, because we have always been starting on unripened cane. But it is possible we may have to begin it earlier and I think we shall push it up to 8th December, because we expect to get a very big crop.

Dr. Matthai—Do you expect ultimately to get to a working season of somewhere about 120 working days? Can you manage that?

Mr. Moodie—I doubt it. If we could get a working season of 100 days, it would give us about 10 lakhs. That is as much as we could expect in these parts.

Dr. Matthai—As far as the price of cane is concerned do you think that this price of 7 annas 3 pies that you are offering would be sufficient for you to get all the supplies of cane that you want in time?

Mr. Moodie—I think so.

Dr. Matthai—7 annas 3 pies delivered at your weighbridge?

Mr. Moodie—Yes.

President—What about the competition of khandsaris?

Mr. Moodie—That is about the worst feature.

President—From which do you expect more competition, from khandsaris or from gur makers?

Mr. Moodie—They are both practically the same in this part of the world, because the khandsari is a man who in these parts is spoken of as a man who makes rab and the gur maker instead of simply converting into rab makes into gur straightaway. They are very largely run together. In one belt they may make both gur and rab.

President—You never used to purchase juice?

Mr. Moodie—No.

President—Would that be a sound proposition at all?

Mr. Moodie—Not from our point of view, because we tap practically all the sources of supply within a radius of 15 miles of this factory and it would be practically impossible for people to bring in juice from any considerable distance especially if they don't take steps to temper the acidity of that juice and it would be dangerous to try that.

Dr. Matthai—I am trying to get on a basis of 7 annas 3 pies.

Mr. Moodie—Our actual highest price would be 7 annas 0 pies to the man who supplies his full quantity of cane.

Dr. Matthai—Have you any idea of what your average cost of cane is likely to be for the current season?

Mr. Moodie — 7 annas 3 pies, the reason for that being that a proportion of it will be deshi cane at 6 annas 6 pies. Then there will be a few men who may not be able to fulfil their *satta*s and they will get 7 annas for their improved varieties and they don't get their 6 pies commission. You have a few men who will bring down the cost of cane here to 7 annas 3 pies. It is a condition of the agreement that if the man fulfils his *satta* he will get the price of 7 annas per maund plus a commission of 6 pies.

Dr. Matthai — (1) he doesn't?

Mr. Moodie — He doesn't get the commission.

Dr. Matthai — How much would he get then?

Mr. Moodie — 7 annas.

Dr. Matthai — So that there is the highest price for Coimbatore cane paid to the man who completely fulfils the agreement, that is 7 annas 6 pies, to the man who gives you improved variety but doesn't fulfil the agreement 7 annas and the man who supplies the deshi cane 6 annas 6 pies.

Mr. Moodie — Yes, 6 annas 6 pies if he fulfils the *satta* and 6 annas if he doesn't fulfil the *satta*. We must safeguard ourselves as we charge no interest. We must see the likelihood of getting the full quantity of cane or get our money back.

Dr. Matthai — If you take the average cost of cane at 7 25 annas, what proportion of cane this season is likely to be of improved variety?

Mr. Moodie — About 75 per cent this year. We get that fairly closely by the amount of cane that we have written, because we have noted the amount of improved varieties and the amount of deshi. We expect this year to get roughly 75 per cent of improved varieties.

Dr. Matthai — On the basis of that by how much do you expect to increase your extraction?

Mr. Moodie — At least by a half of one per cent.

Dr. Matthai — At present it is 7.5 you are likely to get an extraction of 8 per cent.

Mr. Moodie — Yes. I think that is a conservative view for this reason that we are putting in cane knives, we have never tried them but with little experiments we have made we expect to increase our yield much more. It might actually go up to 8½ per cent.

Dr. Matthai — If you increased the proportion of your improved varieties from 30 per cent to 75 per cent the extraction figure might go up to a little more than 8 per cent?

Mr. Moodie — Yes. That is a conservative estimate. You probably don't realise how poor the quality of the deshi cane is in these parts. With as much cane as I used to be able to give in some years our extraction had been 5½ from entirely deshi cane.

President — It is about the same as that of the khandasani.

Mr. Moodie — In other years with the same cane in better seasons we have gone up to very nearly 7 per cent. A great deal depends on the seasonal quality of the cane.

Dr. Matthai — Supposing you took your average price of cane as 7 annas 3 pies and an extraction of 8 per cent, your sugarcane cost per maund of sugar would be somewhere about Rs. 5 10.

Mr. Moodie — Yes. In our statement we deduct molasses and work it out and our cost is 5 4 against 3 72 which we have here. The cost exclusive of molasses was 5 4 per maund of sugar.

Dr. Matthai — What is the gross cost per maund of sugar?

Mr. Moodie — It would be 9 8.

Dr. Matthai — If you take your estimates for the current year, you give the raw material cost as 4 83 per maund of sugar. I take it the whole of that is cane.

Mr Moodie —That is everything

Dr Matthar —What about the raw material costs? What does that include?

Mr Moodie —That includes the cost of cane less the value of molasses

Dr Matthar —The raw material that you are thinking of here is cane?

Mr Moodie —Yes

Dr Matthar —No sulphur or lime?

Mr Moodie —That comes under the overhead charges

Dr Matthar —Your overhead charges are cost above material?

Mr Marshall —The reason for this is here that we have an account which we call raw sugar purchase account and we debit to that account the whole cost of the cane and we credit to that account the value of molasses consumed in the distillery and the value of molasses sold outside. When you deduct that credit from the debit then you get this figure of 183. If you take this figure of cane alone exclusive of value of molasses it should be 54.

Dr Matthar —I believe in making this estimate you have not made any allowance for any possible improvement in extraction?

Mr Moodie —No

President —What is the percentage of molasses?

Mr Moodie —We have a very high percentage of molasses for this reason that you saw the molasses crystallisers and when that molasses sugar is machined we wash it up and our molasses is very light in gravity, because it holds 80 per cent of added water. It doesn't matter to us because it is going to the distillery or we can sell it. We don't turn out the ordinary very heavy thick molasses from our refinery for that reason and our output of molasses is usually between $5\frac{1}{2}$ to 6 per cent on weight of cane. Actually if we were to add no water, it would probably be about 4 per cent.

President —What is your estimate of cane for this current year?

Mr Marshall —The same as last year, 4½ lakhs of cane

President —You got about 28,000 maunds of molasses?

Mr Marshall —Yes

President —At how much a maund?

Mr Marshall —At Rs 2 a maund

Mr Moodie —The chances are that it will be higher

President —Rs 56,000 on the output of how much sugar?

Mr Marshall —15,000 maunds

President —That is Rs 1-6 a maund

Mr Moodie —Yes, but then we were calculating on the increased yield and on the bigger quantity of cane

President —These figures would be reduced considerably this year?

Mr Moodie —Yes

Dr Matthar —If you make about 28,000 maunds of molasses, how much of that do you put in to the open market, and how much do you use for your own distillery?

Mr Marshall —We should sell about 8,000 maunds and manufacture spirit from the other 20,000 maunds. This year we have debited it at Rs 2.8

President —You fix your price with the Excise Commissioner?

Mr Moodie —Yes by tender

President —You have got other contractors?

Mr Moodie —The competition is extremely keen here

President—Would it not pay you to close your distillery and sell your molasses?

Mr. Moodie—We have a certain private trade. This being a very old distillery we have manufactured this Rosa XXX rum and we have a very large stock from 1913. It is 14 years old and it is very difficult to get rid of that under the present conditions. In the old days we used to sell as much as 10,000 gallons a year and we now sell about 2,000 gallons. It has lost its popularity in a way owing to the abnormal excise duty of Rs 21-14 a gallon. Our price per gallon for that stuff which is 14 years old would be Rs 6.

President—You credit your molasses at a fixed rate to the distillery?

Mr. Marshall—We fix a rate each year. This year it is Rs 28. The maximum price at which we sold was Rs 3.

President—This coming year?

Mr. Moodie—We would see how the prices of molasses go. We would not bother about it till our new financial year commences.

Dr. Matthai—Generally the rate at which you debit it to your distillery is about 15 per cent less than your market rate?

Mr. Moodie—This is an abnormal year where the price of molasses has gone up to Rs 3. We never debited it to the distillery below Rs 2.

Mr. Marshall—It used to be Rs 1-4-0.

President—What is the price of imported molasses at Calcutta?

Mr. Marshall—It was Rs 3 a maund some months ago.

Dr. Matthai—Does the price that you get for your molasses here depend on the price of imported molasses?

Mr. Marshall—Yes.

Dr. Matthai—If you take for example the c.i.f. price of molasses at Calcutta, add the duty and the freight here, do you get the market price?

Mr. Moodie—Up here we don't quite get the market price. Just as the price of Java sugar regulates the sugar market, so practically the price of Java molasses in Calcutta regulates the molasses market.

Dr. Matthai—As far as Cawnpore is concerned, the price of sugar can be worked out almost exactly to the c.i.f. price plus the duty and the freight. I suppose in the same way you could get at the price of molasses here by adding the duty and the freight to the c.i.f. price of molasses at Calcutta.

Mr. Marshall—No, you cannot. It is Rs 3 in Calcutta. That includes duty and fire on rail. I sold 4,000 maunds at Rs 3 and another 2,000 maunds at Rs 2-12-0.

President—It pays a man on account of the keen competition to sell a large amount of his output in the local market and therefore the price is reduced. So the freight advantage that you get in sugar you no longer get in molasses. You will probably in time lose that on sugar. If there is going to be a very large increase in the number of white sugar factories, you will have exactly the same position in sugar as in molasses.

Mr. Marshall—These molasses are not as good as the imported molasses for distillery purposes.

President—Why do you say that?

Mr. Marshall—We can't get the same yield from the country molasses as we can from the Java molasses.

Dr. Matthai—If you take both sucrose and glucose there is a higher content in the imported molasses, is there?

Mr. Marshall—Yes.

Dr. Matthai—In spite of the fact that they extract more of sucrose?

Mr. Marshall—The reason for that is that their moisture content is lower. Their molasses is very much thicker and more concentrated than the country molasses.

Dr. Matthew—Then to some extent the fact that you can get only Rs 3 here for then Rs 3 in Calcutta, is due to the difference in quality?

Mr. Marshall—Yes. Cawnpore molasses is better than ours, because it is thicker.

President—What is the position as regards the application for tariff equality in regard to molasses?

Mr. Marshall—At present rates of molasses and spirits it is absolutely out of the question.

President—Am I right in thinking that provided the sugar position is put right by way of a protective duty you are not pressing this application for tariff equality on molasses? You consider that withdrawn?

Mr. Marshall—Yes, under present conditions.

Mr. Mondie—We also still reserve the right of raising the question of a duty on imported spirit.

President—What is the total amount you pay in freight on your sugar sending it to various places?

Mr. Mondie—All our sales are made for factory.

President—Your main centre is Delhi?

Mr. Mondie—Yes, and Chandour and Khurja. It varies from year to year. Last year sale in Delhi was very small.

President—What is the freight from here to Delhi?

Mr. Mondie—6 annas I should think.

Dr. Matthew—Have you any idea of what your average realisation was last year per maund of sugar?

Mr. Marshall—Our total realisation from 1st April 1929 to 31st March 1930

Dr. Matthew—Can you give me the quantity represented by that figure?

Mr. Marshall—I think I have got the average selling price. Rs 9-10-4 is the total average for the last year's output.

Dr. Matthew—That is your average price for Rosa?

Mr. Marshall—Yes, 1st April, 1929 to 31st March, 1930.

President—In that year the price of Java sugar at Calcutta was about Rs 9-10. I don't think it dropped below Rs 9-3-0 until January 1930.

Mr. Marshall—I am afraid I am wrong in the statement I made just now. This average is our total average for that season.

President—Here are the figures by months—

	Rs	s	d
1929-30—April	9	7	0
May	9	5	6
June	9	2	0
July	9	2	0
August	9	1	0
September	9	1	0
October	9	4	0
November	9	1	0
December	8	12	0
January	8	6	0
February	8	8	0
March	8	14	0

Mr. Marshall—The price of Java sugar in Cawnpore was Rs 9-14-0.

President—Deduct Rs 1-0-0 from that it is Rs. 8-8-0. It was Rs 8-8-0 in Calcutta we might say when it was Rs 9-10-4 here.

Mr Marshall — Yes

President — A freight advantage of Rs 1-2 0?

Mr Marshall — About that

Mr Moodie — If the price of Java sugar was stabilized at Rs 10 in Calcutta we would reckon on our selling price of Rs 11-1 0 to Rs 11 6 0, if internal competition did not decrease it

President — If the number of factories doubled here your freight advantage would go?

Mr Moodie — Yes. The freight advantage tells in our favour in the Punjab where we used to sell a lot of our sugar because we are well situated, until the Java prices went so low that it paid them to bring from Karachi and Bhavnagar

President — You can rely on this Rs 1 2 0 at any rate for the next four years?

Mr Moodie — Yes

President — Would you mind telling us what alterations would be necessary to bring your plant up to date. I understand that the principal defect is that you have a crushing capacity in excess of the boiling capacity?

Mr Moodie — That is so

President — Taking your crushing mill you have already put in knives. Apart from that out of your 11 rollers I understood you to say that two mills have to be replaced and run by one engine

Mr Moodie — That is really an important question which will have to be faced by us very shortly

President — First of all you have two rollers and then three sets of three?

Mr Moodie — The first five roller mill is run by one engine and the others each by a separate engine, which of course is a very old practice

Dr Matthai — How is the cane cutter run?

Mr Moodie — It has a special engine

Dr Matthai — At present the cutter has an engine, the first five rollers have one and the other two have each one?

President — There are four engines?

Mr Moodie — You would always have to run your cutter by an engine or by a motor. Our motor generating plant is not very powerful here

President — Can you not do it by a belt from the engine running the rollers?

Mr Moodie — No, because that engine requires special regulating. It has to be slowed down at certain times and stopped at other times

President — Would it be possible to run all your sets of rollers by one engine?

Mr Moodie — Yes. That is the modern practice to run a 11-roller mill with one engine. The only reason why I suggest a new six-roller mill to be run by one engine is that we have already a five-roller mill driven by one engine which is almost new and which is not sufficiently big to drive all the rollers

President — You would have to replace two engines by a single new engine?

Mr Moodie — And two mills by one engine

President — After the crushing equipment?

Mr Moodie — Our sulphitation plant is quite big enough. We should probably have to increase our de-fecating and triple effect tanks by adding another vessel with a fire-heater or quadruple it. It would then be capable of taking 50 per cent more. That would necessitate another vacuum pan and as our present vacuum engine is working up to its full capacity it would mean a new engine with new barometric condenser and water pump and

that would give an additional capacity of 50 per cent. As regards the crystallisers we should have to throw out these and probably put in four or five modern crystallisers, quick working ones fitted with water and steam jackets which would give you quick crystallisation and then throw out our machines and put in up to date electrically driven, water driven or belt-driven centrifugal machines.

Dr. Matthan—Supposing you balanced the factory in that way by how much could you increase your output?

Mr. Moodie—By 50 per cent.

Dr. Matthan—From 35,000 you could go up to about, say 50,000 or 60,000 maunds?

Mr. Moodie—This year as a matter of fact we will be turning out 50,000 maunds of sugar, if we are going to get over 7 lakhs maunds of cane that we have been told we will get. We have written 0.60 lakhs.

Dr. Matthan—When you say in your replies to the questionnaire that your capacity is 400 tons of cane a day, is that the capacity of the whole plant?

Mr. Moodie—It is the capacity of the weakest part, that is to say of the boiling house.

Dr. Matthan—Last year your output was less than half your capacity?

Mr. Moodie—Yes.

Mr. Marshall—We work full capacity only about five weeks in the year.

Mr. Moodie—This factory started first of all as a six-roller mill and one Black and Wilcox boiler and practically the same equipment in boiling with the exception of the small pan. The little brass pan was in the old sugar house and was used for making white crystal sugar. It was taken over and put up here and that is practically the only addition to the boiling part of the house. The six-roller mill is now a 11 roller mill and yet nothing has been added to the boiling part of the house.

President—If you were to make all these additions what would be the amount of cane that you could deal with in the season?

Mr. Moodie—We could then deal with 15,000 maunds of cane a day. That would mean 15 lakhs maunds of cane if we took a 100 days season. There is this trouble, that the cutting capacity of this district is limited and we can only get a maximum of 400 carts a day at present.

Dr. Matthan—Can't you get any of your supplies by rail?

Mr. Moodie—We do get. We get an average of 5,000 maunds by cart and we tap the railway at three stations. We have one station on the main line and two on the Sitapur branch and we get supplies by rail regularly through those stations, so that we can get another 5,000 maunds by rail.

President—To what extent do you expect to improve your efficiency when you have your new equipment?

Mr. Moodie—I think if we can get these improved varieties and improve the equipment in the factory we would have no difficulty in getting 85 per cent of sugar.

President—That is sugar extraction per cent cane, what would that mean in the all-over efficiency per cent?

Mr. Moodie—That would be something approaching 85. There is no reason why we should not attain the Java efficiency.

President—85 is the Java practice?

Mr. Moodie—That is percentage sucrose in sugar recovered on sucrose recovered in cane. We cannot get above 80 or 82.

Dr. Matthan—Have you figures of your mill efficiency and your boiling house efficiency?

Mr. Moodie—No.

Dr. Matthai — From that you could get your over-all efficiency

Mr. Moodie — Exactly, but we don't keep these records

President — At any rate you hope to work up to an all round efficiency of 80 per cent?

Mr. Moodie — Yes

President — What is included in the raw material?

Mr. Moodie — Cane to start with, less molasses

President — What about handling charges?

Mr. Marshall — That all comes in under overhead

President — By overhead you mean cost above materials?

Mr. Marshall — European establishment, native establishment, stamps and stationery, depreciation, director's fees, travelling allowance, etc

Dr. Matthai — Do head office charges come out of that?

Mr. Marshall — Yes, and the managing agents' allowances

Dr. Matthai — Commission is based on the profit?

Mr. Marshall — Yes

President — Your fuel comes to 98 of a rupee that is very heavy!

Mr. Moodie — Yes. The place started with one boiler and is now working with two boilers. These are working at full capacity full time and we have no reserve steam. Our position is such that when the big pan has to be started the pan man has to send word to the boiler man to fire up the wood to start the boiler and although the Babcock and Wilcox boilers are quick steamers, bagasse is very unsatisfactory fuel for quick firing particularly

President — Three lbs of bagasse is equal to one lb of coal?

Mr. Moodie — Yes that is right I think. You must of course remember that that cost of fuel is not actually the cost of fuel used only during the cane season, but it is fuel used during the whole year and allocated between the distillery and sugar and also represents the oil used in our oil engine, as it is running the whole day long and the night. During the idle season we turn up our rollers and cut them again with a tool and sharpen them for the cold season.

President — What is the oil engine used for?

Mr. Moodie — For generating electricity. Our workshop is run by electricity and there is electric lighting for the factory and the bungalows and the inn. Our total fuel although it is shown there as 98 actually last year the cost of fuel for the cane season only was Rs 17,207 against a total of Rs 38,886 or a little less than half. That would mean that our fuel cost for the cane season would then come down to Rs 4.

President — Taking your overhead charges will it be possible for us to work out this item No 1, it would be convenient for comparison? Raw materials—1929-30 1,28,056

Mr. Moodie — That is of course after credit for molasses

Dr. Matthai — Molasses are approximately 57,000 rupees

President — What is the output of sugar this year?

Mr. Moodie — 34,400 maunds. Sugarcane would be 1,85,000 rupees roughly. Then there are raw materials such as sulphur and lime.

Mr. Marshall — I am afraid I have not got the details here. We lump them together in an account called manufacture of sugar.

President — Labour?

Mr. Marshall — European establishment Rs 29,000, Native establishment Rs 25,000

Dr. Matthai — Does that native establishment include all your casual labour?

Mr. Marshall — That is included in manufacture of sugar

Mr. Moodie — Of the 479,000 maunds our cost of cane is Rs 1,92,808

President —That was last year, was it not?

Mr. Moodie —Yes

Dr. Matthan —The only two items for which you give us separate figures is supervision, establishment and office charges. You have got also the figure for current repairs and renewals.

Mr. Marshall —Yes 'repairs' Rs. 11,837

President —Could you tell us your head office expenses including managing agents' commission?

Mr. Marshall —Rs. 12,800

President —Managing agents' commission is 7½ per cent. of net profit?

Mr. Marshall —Yes

Dr. Matthan —Is the cost of packing included in any of these?

Mr. Marshall —Yes, in the manufacture of sugar.

Mr. Moodie —We can tell you that Mds. 11,000 2½ will give you the number of bags used, that is equal to 13,700 bags at Rs. 11 per 100 bags = Rs. 5,801

Dr. Matthan —Let us take it roughly at Rs. 5,000

Mr. Moodie —Yes

President —That is very nearly 1 anna a maund

Mr. Moodie —That would be last year. This year it would be a little less because we have paid for bags Rs. 38 against Rs. 41 in Calcutta and that would be Rs. 10 up here against Rs. 13 or practically 2½ annas to 2 annas 7 pios

President —You think if you got a fixed price at Calcutta of Rs. 10, that would be all right as far as you are concerned?

Mr. Moodie —Absolutely

President —That would give you roughly Rs. 11-10 up here

Mr. Moodie —Yes

Dr. Matthan —What is roughly the present position? In 1920-21 your net cost was Rs. 8.67 a maund. Assume that as the price for the current season. The price of Java sugar in Calcutta now is Rs. 8.50. You will get a freight advantage of Rs. 1.20, that will give you Rs. 9.70 and this is Rs. 8.67

President —Rs. 8.67 includes everything except profit?

Mr. Marshall —Yes

President —That would be a profit of 11 annas a maund and a capital of, say Rs. 6 lakhs?

Mr. Marshall —Rs. 6,51,000, that does not include anything for repairs.

Dr. Matthan —Interest on working finances is included in your overhead so that all that you have got to make allowance for now is interest on fixed capital?

Mr. Marshall —Yes

President —At present prices you are running it at a profit of about 4 per cent. on your capital?

Mr. Marshall —Yes

President —And you want that put up to 12 per cent. by stabilizing sugar prices at Rs. 10 per maund in Calcutta, out of this you must provide for your reserves?

Mr. Marshall —Yes

President —As far as you are concerned you will be all right with a profit of 10 per cent.?

Mr. Marshall —Yes. I would consider 10 per cent. a fair return in any industrial concern.

Mr. Moodie —In fact we decided this morning to write home at once and call for estimates—I am making a list of things—so that if the Tariff

Board's report is favourable and if the Government takes action we can cable home at once

President—What is your idea about the period of protection?

Mr. Moodie—I have had 39 years' experience in India in sugar entirely and I think we are at the bottom of the cycle now and in a few years you will find your sugar again where no protection would be necessary and Government will have to make arrangement for that. Without any excuse whatever but pure shortage of production one year sugar jumped to Rs 30 per maund. It was simply a shortage of production and increase in consumption. It does not seem logical that sugar should jump more than 100 per cent, in price in one year.

Dr. Matthai—Assuming Java is able during the next few years to continue producing at the present low cost, what kind of period would you suggest as the period of protection?

Mr. Marshall—I won't suggest any period at all. It should always be there to stabilize the price. If Java sugar went up over Rs 10 then you would reduce your duty accordingly.

Dr. Matthai—We are administering a policy of what we call discriminating protection so that we have got to fix a limit to the amount and period of the burden you would lay on the consumer.

Mr. Moodie—10 years would not be sufficient if the Government's intention is to stimulate the industry to such an extent that a very large increase in the number of factories should take place.

Dr. Matthai—On what ground do you base that statement?

Mr. Moodie—There is the difficulty of raising capital. Presumably the majority of capital would be Indian capital. Indian capital is not going into a business or an industry which is only going to be protected for a short time and which may then be allowed to fall back on its own resources.

Dr. Matthai—We declare the industry protected and investors are coming into the business, within what time do you think it would be possible for an investor to start the industry, and organize and establish it on a basis of say relative permanence?

Mr. Moodie—Provided he selects his site carefully and has his cane ready on the ground, he should be able to do it in two to 2½ years.

President—If he has his cane ready for him?

Mr. Moodie—That is the most important factor, plentiful supply of cane; that must be ready otherwise if you have got to break new ground and plant, then it becomes a question of how long your supply of plentiful cane is going to take to mature.

President—Even if you have very favourable conditions and a considerable amount of cane available it will take some years to organize your supply?

Mr. Moodie—I don't think so.

President—How about the relative attraction of gur? Then you will have to offer to people an inducement to get the new variety of cane?

Mr. Moodie—That would all be a matter for consideration, that is all a part of the organization.

President—You must have taken years to organize this system of *sattas* which you have now and a new factory will have to do the same?

Mr. Moodie—Yes. Our system has been running for very many years, we started in 1904 and started against the competition of the *gur* maker and the *lab* maker and for the first three years I don't think the factory got more than 2 lakhs of maunds of cane. There was the inherent conservatism first of all to overcome and although the factory had been buying *lab* from the *lab* makers for refining, it was a different matter when they came to purchase cane, because the man would not sell them cane. Take somewhere in the Meerut district, Meerut eating *gur* is very well known and famous all over India. There are enormous tracts of land there where

I am quite sure central factories could be put down. I don't think it should be difficult to arrange for supplies of cane. It is all a question of price. If a manufacturer is going to see Rs 11-4-0 for sugar practically certain, he could regulate his cost of cane accordingly. With a modest factory he could reckon on getting 9½ per cent from a good variety of cane.

Mr Marshall—Take the Belapur factory. It took them four years to buy the factory, they did not buy from home. They shipped the whole thing from Burma which was practically lying in packing cases, and they erected it.

Mr Moodie—Nowadays if you send an order to a sugar machinery firm if you give them definite orders they will deliver it on board within 9 months and you can have that on site within another three months and it should be ready for working in another 9 months. Marhowrah sugar factory was erected within 9 months and we had to bring the machinery over bad roads, all the machinery had to come 18 miles over *cattle* roads. I was there at the time.

Dr Matthai—On what basis do you suggest this period of 10 years?

Mr Moodie—I don't think we have suggested 10 years. I say that I don't think that 10 years would be enough. I presume Government's intention is to interest Indians in the expansion of the industry. I presume they don't want foreign capital.

Dr Matthai—The idea is to get the sugar industry developed in this country and naturally the bulk of this industry when it covers the whole of the Indian market would be in Indian hands and therefore you have got to provide sufficient time for a considerable amount of Indian capital to come into the business. Taking that into account what kind of period would you suggest?

Mr Moodie—I should say that 10 years would not be enough.

Dr Matthai—That is to say 10 years would not be enough for the sugar industry to develop to such an extent as to meet the bulk of the requirements of the market?

Mr Moodie—You could not possibly do it.

Dr Matthai—We are importing a million tons of sugar.

Mr Moodie—At that rate you would require not less than 250 factories of about 4,000 tons capacity each.

Dr Matthai—We were told by Messrs Begg Sutherland and Company that it was quite a reasonable thing to expect an output in India of 400,000 to 500,000 tons within a reasonable period with 50 new factories.

President—50 new factories in the United Provinces and Northern Bihar.

Mr Moodie—The biggest outturn which has ever been made by any factory was by Champaran last year.

Dr Matthai—It was very nearly 7,000 tons.

President—Taking into account the existing factories?

Mr Moodie—The present factories turn out about 80,000 tons so you want factories capable of producing 800,000 tons. I don't think, in these parts anyhow that is in the north of the United Provinces you would find a factory producing more than 4,000 tons, which means about 12 lakh maunds of cane. The season is against you, your working season is so short up here whereas in Bihar, as I said, you have got another 45 days. Bihar is the only place where you could run for 140 days and you would then need 60 factories.

Dr Matthai—60 factories of about 4,000 tons capacity?

Mr Moodie—Yes. Each of these factories would cost about Rs 15 lakhs which would not leave much room for working capital.

President—That is 9 crores of rupees?

Mr Moodie.—I doubt very much if that would be easy unless you have more permanence of price or stabilization.

Dr Matthai.—If you had an additional duty of Rs 2 a cwt somebody in the country is going to make about 3 crores of rupees a year.

Mr Moodie.—I suppose there are heaps of available financial resources.

President.—The existing factories would expand.

Mr Moodie.—I think every factory would be hoping to expand as far as possible. The economy in production costs to be gained by that of course would be well worth while.

Dr Matthai.—You have not thought out exactly on what lines the scheme of protection should be framed except that the price of sugar in Calcutta should be stabilized at somewhere about Rs 10?

Mr Moodie.—No. We are rather selfish I am afraid. Beyond that we have not considered the question. We each look at it from our own point of view.

Dr Matthai.—From your own point of view can you tell us how exactly the stabilization could be effected?

Mr Moodie.—I should say at once that Government should put on an extra duty of Rs 2 8-0 a cwt which would bring the Java price to about Rs 10 8-0 in Calcutta.

Dr Matthai.—If Java cuts prices?

Mr Moodie.—Then you will have to have an additional duty put on because all your efforts will be nullified by Java.

President.—What about forward trade?

Mr Marshall.—We know that would be difficult. But you also have tariff valuations every year.

Dr Matthai.—So much of your business in sugar is done on the basis of forward sales and purchases, supposing you had a system of automatic duties that is to say when the price varies the duty varies accordingly, that would make your forward business almost impossible.

Mr Marshall.—Yes. You would have to gamble, you have a fairly good idea of how the market is going on. We do not sell huge quantities for forward it is only the reporters who do so.

President.—Even if we were favourably disposed towards an additional duty the trade would be against it. Do you think any sort of assistance in stages would be a satisfactory plan? For example we work out what the fair selling price of Indian sugar is, that is to say a price which would allow a factory to obtain a 10 per cent profit on the basis of the cost which may be expected say in the next 15 years. Then having ascertained the duty on that basis add an additional duty for the first 7 or 8 years because during that period that stage of efficiency would not be attained. For instance in the first 7 or 8 years if you want to establish new factories you have to arrange such a price for sugar as will enable you to pay a decent price to the cane grower. Say in the first 8 years we might work out a fair selling price on the basis of 8 annas per maund cane whereas our basic selling price to be in force for the whole period might be 6 annas per maund cane. In the same way some allowance has to be made for the cost of fuel and initial failure to work up to a high standard of efficiency in extraction and so on. Now those are temporary features which might be expected to disappear in the course of the next seven years. But additional assistance might be necessary in the first seven years. It might therefore be reasonable to fix a basic duty for 15 years and in the first seven years to add to that duty a certain definite additional rate which at the end of seven years might disappear.

Mr Moodie.—That would be quite a reasonable proposition.

President.—That is to say the basic duty will never be altered but the additional duty might be liable to alteration at the end of seven years.

Mr Moodie.—That is an excellent idea.

President—An additional duty should also make provision against any possible dumping from Java.

Mr. Moodie—That is an excellent idea. Seven years is quite enough for the existing factories to modernize and would give new factories the chance of getting modern up to date machinery from which they could expect to obtain better results than the older factories.

Dr. Matthan—For what period do you think the basic duty should be fixed?

Mr. Moodie—I should think 15 years would be a very reasonable period.

Dr. Matthan—In answer to question 57 you give us some figures for the cost of building a new factory? Is that based on any definite figure?

Mr. Moodie—We simply say that building a new factory such as ours would cost Rs. 2 lakhs for buildings and about 8 lakhs for modern machinery. I really meant that the Rs. 8 lakhs would be the sugar machinery manufacturer's price.

Dr. Matthan—Rs. 8 lakhs for a factory with a capacity of about 200 tons a day?

Mr. Moodie—Yes. That would be bare cost. You would have nothing to play with there.

Dr. Matthan—It would be just fixed capital expenditure and no working capital?

Mr. Marshall—No working capital. A man came to my office a few days ago and said that he contemplated building a 100 ton factory and he reckoned that the machinery would cost Rs. 7 lakhs.

Dr. Matthan—That is including freight and erection?

Mr. Marshall—Yes.

Dr. Matthan—Can you tell me why in answer to question 61 the dividend you distributed in 1920, 1921 and 1922 is entered as nil? What was the position?

Mr. Marshall—The Company made a loss.

President—Then the price of sugar was highest.

Mr. Marshall—We were strictly speaking writing off that loss. It took us those three years, 1920, 1921 and 1922 to wipe off that loss of Rs. 12 lakhs and in 1923 we had a credit balance and we distributed a dividend at 4 per cent to the shareholders.

Dr. Matthan—What happened to the distillery business in those days?

Mr. Marshall—We had a big contract in Surat but there was a famine that year and the price of molasses went up to Rs. 4 or 5 a maund. We reckoned on buying it for five years at Rs. 2 a maund and we lost all that money.

Mr. Moodie—We started in 1914, we ordered in Germany for a new still and then War broke out and we lost all that money; we had been promised a certain amount of compensation from the Bombay Government but when they came to examine the question they said we had to pay them Rs. 70,000 which we had to pay.

Dr. Matthan—That is an extraordinary position! Those were the years when the sugar prices were high.

Mr. Moodie—Yes. 1924 was our best year, we made Rs. 2,40,000 on sugar.

Dr. Matthan—What is the idea of making the bulk of your sugar into No. 2?

Mr. Moodie—Because we have improved the quality of it to such an extent that we cannot really make very much better No. 1.

Dr. Matthan—What I am trying to get at is what precisely is the difference between No. 1 and No. 2? Is there any difference in price?

Mr. Moodie—Yes, 3 annas a maund.

Dr. Matthan—Could you count on getting a more assured market for No 2 than No 1?

Mr. Moodie—No. The preference is for No. 1 sugar. We sell No 1 more readily than No 2.

Dr. Matthan—Then why don't you make more No 1?

Mr. Moodie—We cannot make it sufficiently white.

Dr. Matthan—To make No 2 do you get your molasses from No 1 sugar and mix that with cane juice?

Mr. Moodie—No 3 is made entirely from cane juice and is washed up in the centrifugal machine with water as white as it can go. Our clarification methods are not really very good, I mean not as good as Java. We cannot approach Java white in quality.

Dr. Matthan—Is your No 3 as good as Indian No 1?

Mr. Moodie—Yes. It is perhaps not just as good as double carbonation but is as good as the ordinary sulphitation factory's but our No 2 is very much superior and always fetches a better price than any other No 2 in India.

Dr. Matthan—What is the polarization of No 2?

Mr. Moodie—About 80.

Dr. Matthan—And No 1?

Mr. Moodie—About 88.8.

Dr. Matthan—Your No 2 is very different from brown sugar, is it?

Mr. Moodie—It is anything but brown sugar.

Dr. Matthan—I suppose you make just enough No 1 sugar to get molasses for your No 2.

Mr. Moodie—No. We always endeavour to make No 1 but I found that the colour was not good enough for No 1 and we simply called it No 2 and the molasses were boiled up again with more cane juice and made into No 2.

Dr. Matthan—Last year you produced a certain amount of No 1, 367 mounds, and you found it was not up to the standard and you passed it on to No 2?

Mr. Moodie—Yes.

President—What is this tramway you refer to?

Mr. Moodie—It is really the broad gauge siding which we have from Ross junction station. It is $3\frac{1}{2}$ miles long. It was built by us when the O and R Railway was built.

President—In your capital account what valuation is put on that?

Mr. Moodie—The total cost to put it up was Rs 83,000 and it is now valued at about Rs 26,000 I think.

President—And on that the Income Tax authorities allow you 5 per cent depreciation?

Mr. Moodie—Yes.

President—And on machinery 6½ per cent?

Mr. Moodie—Yes.

President—Is that 6½ per cent on machinery excluding annual overhaul which you charge against revenue?

Mr. Moodie—Yes.

Mr. Marshall—Repairs we charge against revenue.

President—Repairs constitute a pretty expensive item in the sugar business?

Mr. Marshall—Yes, we spent Rs 11,000.

Mr. Moodie—We are only allowed depreciation on additions. We say for income tax purposes "value of machinery as on 31st March 1929, additions

during the year so much " total so much, depreciation on that for the year so much, but no repairs

Dr. Matthar—What is the income tax rate on sugar machinery?

Mr. Moodie— $0\frac{1}{2}$ per cent

Dr. Matthar—The ordinary income tax rate on machinery is $7\frac{1}{2}$ per cent, I suppose they allow you a lower rate

Mr. Moodie—On any additions they will give you $0\frac{1}{2}$ per cent, for 10 years. We have every year a lapsing depreciation and we have a very heavy item Rs 11,00,000. The allowance for depreciation on that will then cease

Dr. Matthar—If they allow 10 per cent they allow it for 10 years?

Mr. Moodie—Yes

President—Then allowance is for obsolescence really?

Mr. Moodie—Yes, it is. As I said repairs and renewals in a sugar factory are very heavy. If you buy a new roller and scrap the old one you are quite justified in saying that it is an "addition."

**L. H. BROTHERS' SUGAR FACTORY AND OIL MILLS,
PILIBHIT.**

**Oral Evidence of Rai Bahadur SAHU HAR PRASAD and Mr. BADRI
NARAYAN, the Manager, recorded at Bareilly on Friday, the
21st November, 1930**

President —I want to explain before we start taking evidence that anything which is recorded now by our stenographers will be sent to you at a later date to be read by you and corrected where necessary and if you wish to keep anything confidential in the evidence you will please mark it confidential and then we shall respect it. But you understand that all evidence taken, whether confidential or not, must go to the Government of India.

Rai Bahadur —Only we would wish that our statement of loss and profit may be kept confidential. I think there is no other point.

President —But we cannot keep anything confidential from the Government of India.

Rai Bahadur —I understand. We do not wish that statement to be made public.

President —If you wish that kept confidential, we shall make arrangements to keep it confidential and it will not be published.

Rai Bahadur —There is nothing to hide from Government.

President —First of all as regards your supply of raw material part of that you obtain from your own zamindari?

Rai Bahadur —Yes, nearly half of that is obtained from our own zamindari.

President —When you say that it is obtained from your own zamindari, does that mean that the cultivation is carried out under your directions or does it mean that you obtain it from your tenants?

Rai Bahadur —The tenants do it of their own accord but we advise them. It is all cultivated at the tenants' expenses, not our own. We pay cash price for the cane we purchase.

President —Have you no home farm?

Rai Bahadur —We have not got that. Since two years we have opened some cultivation farm. That is the only thing we have. Before that, we had no cultivation in any of the villages.

President —What acreage have you got under sugarcane in this farm?

Rai Bahadur —It is situated in two or three villages only. It comes to about 100 acres.

President —Do you grow with the intention of supplying sets?

Rai Bahadur —We are supplying seeds as well. The remainder we utilise in our factory.

President —What kinds of cane are you growing in your own cultivation?

Rai Bahadur —Coimbatore canes.

President —Do you remember the numbers?

Rai Bahadur —213, 214 and 290.

Dr. Matthes —Do you give advances to your tenants?

Rai Bahadur —Yes.

Mr. Badri Narayan —In substantial amount.

Dr Matthai—How exactly is it arranged? When are the advances given?

Rai Bahadur—They are given in May, June and also throughout the whole year. Whenever they are in need of money for their expenses they take it from us.

Dr Matthai—Up to what amount do you give advances?

Rai Bahadur—There are two kinds of cultivators, one class who are indebted to us a great deal and they are paid a little less price for their cane.

Mr Badri Narayan—We don't charge interest from them.

Dr Matthai—You don't charge interest in either case?

Mr Badri Narayan—No.

Rai Bahadur—Then, there are those cultivators who sell their cane to us for cash price. They are paid a higher price. There is a difference between the two of about half an anna to one anna per maund.

Dr Matthai—Do you enter into agreements with them when advances are given?

Rai Bahadur—Yes.

Dr Matthai—The agreement states the price?

Rai Bahadur—Yes.

Dr Matthai—So that the price is practically fixed in May or June?

Rai Bahadur—Yes.

President—As regards the difference in price, what does that represent?

Rai Bahadur—You mean the difference between the price which we pay to the cultivators who sell for cash and the price which we pay to those who are indebted to us.

President—Yes.

Rai Bahadur—As I just told you, it varies from Rs 1 to Rs 6 or Rs 7 per 100 maunds. It comes to nearly an anna per maund.

Mr Badri Narayan—A little less than an anna.

President—What does that represent? Does that represent interest on past loans?

Rai Bahadur—As we advance a great deal of money, it is a risk we take in lending money to the cultivators. It is not fully paid back. Sometimes when any of the cultivators leaves the village, it is all gone.

President—Is it a definite rate of interest or does it represent discount so to speak?

Mr Badri Narayan—It is not discount. As a matter of fact, a good deal of the amount remains outstanding against them.

President—Supposing there is a tenant in a zamindari. He owes Rs 500 at the commencement of the year. He has an acre of cane and the zamindar perhaps advances him another Rs 30. He would agree to sell his cane at a less price than an outside cultivator, probably an anna less?

Rai Bahadur—Yes.

President—Is that not taken against the interest of the loan?

Rai Bahadur—No.

President—It is simply an understanding?

Rai Bahadur—Yes.

President—The tenants who are indebted to the zamindar deliver their cane at a definite rate?

Rai Bahadur—Yes. It is agreed between the tenant and the zamindar.

Dr Matthai—The whole amount of the advance is paid before July?

Rai Bahadur—No. In our zamindari villages I think it runs during the whole year. Whenever a cultivator stands in need of any money for his expenses, supposing he wants to purchase a pair of bullocks or any other thing or he wants money for any marriage, he always comes to us and takes money. Other cultivators outside the zamindari are paid advances from June up to November.

Dr. Matthan—Up to the time when the cane is harvested?

Rai Bahadur—Yes.

President—Do these advances carry interest?

Rai Bahadur—No. Those tenants who give their cane and take the price afterwards are paid one anna more.

Dr. Matthan—If you take the average advance given to cultivators, does that amount to about 50 per cent. of the price of cane?

Rai Bahadur—Yes, for cash purchase system only.

Dr. Matthan—Sometimes above that?

Rai Bahadur—Yes, in the case of indebted tenants it is twice and thrice the actual price. We have calculated the price. Last year and this year it comes to about Rs. 50 per 100 maunds.

President—That comes to 8 annas a maund?

Rai Bahadur—Yes.

President—What rate do you pay for your cane? What is your all round rate for cane delivered at the factory?

Rai Bahadur—Rs. 50 per 100 maunds.

President—You pay 8 annas a maund?

Rai Bahadur—Yes.

President—That is for outside cultivators?

Rai Bahadur—Yes. Those who are indebted live in our zamindari and are paid Rs. 45.

President—What is the average price of the cane delivered at the factory?

Rai Bahadur—I think most part of it is paid for in cash.

President—How much per maund does it come to when it is delivered at the factory?

Rai Bahadur—The average will come to Rs. 1 to 1½ less than Rs. 50.

President—So that your cost is somewhere between 7 and 8 annas per maund.

Rai Bahadur—I don't think that it costs less than 7½ annas per maund.

President—That includes cutting?

Rai Bahadur—Everything.

Dr. Matthan—All this is Coimbatore cane?

Rai Bahadur—Yes.

Mr. Badri Narayan—For the last two years only.

Dr. Matthan—You don't use any other cane, do you?

Rai Bahadur—This year I think about 2 per cent.

Dr. Matthan—Is that all?

Rai Bahadur—Yes.

President—Practically all the land under cane is under Coimbatore cane?

Rai Bahadur—Yes.

Mr. Badri Narayan—It has come to that in the last two years.

Rai Bahadur—They were shown an advantage from the factory side. We paid last year and the year before last something more for Coimbatore

variety. So, the cultivators are all inclined to sow that variety and leave out the old variety of cane.

President — Now it is not necessary to give any bonus for Coimbatore cane?

Mr. Dadu Narayan — We don't give any.

Dr. Matthai — What was the bonus that you gave for the Coimbatore cane in the old days?

Rai Bahadur — Rs. 3 more per 100 maunds.

President — Do you supply sets at all to the cultivators?

Rai Bahadur — Now they have their own seeds. At first when they were not available we supplied them from Government farms from Shahjahanpur and Nawabganj.

President — You got them from there and sold them to the cultivators?

Rai Bahadur — Yes.

President — What about manuring? What manure do you use?

Rai Bahadur — They generally use cow dung, night soil, etc.

President — Do they use artificial manure at all?

Rai Bahadur — No.

President — Do you use it at all?

Rai Bahadur — No. I utilise the press mud for manuring purposes.

President — Do you find that satisfactory?

Rai Bahadur — Yes, it is giving good results.

President — Do the cultivators who do not sell their cane to you make it into gur?

Rai Bahadur — They sell it to the manufacturers who make sugar by the old process.

President — Do you mean khandasur?

Rai Bahadur — Yes, or they make their own gur.

President — Do they make gur much?

Rai Bahadur — Yes, they do.

President — What is the price of gur at present?

Rai Bahadur — It is between six and seven seers per rupee.

President — How much is it per maund of gur?

Rai Bahadur — Between Rs. 6 and Rs. 7.

President — If I go into the market at Pilibhit and want to buy eating gur, how much would I have to pay?

Rai Bahadur — For a maund you would have to pay Rs. 7.

President — If I want to buy second gur—not quite as good as eating gur?

Rai Bahadur — You can get it at Rs. 6. Good gur can be had at Rs. 7. Inferior quality gur can be had for a little less.

President — What is the average price for gur?

Rai Bahadur — It is not fixed.

President — No. Before the gur season, it is a little bit more expensive. In another two months, when the gur season is on, it will be cheaper.

Rai Bahadur — Yes.

President — What will be the price in the season?

Rai Bahadur — It won't go below Rs. 6.

President — Out of that Rs. 6, how much represents the commission of the dealer? Supposing the cultivator sells to a dealer, how much does the dealer expect to get on that?

Rai Bahadur — About 8 annas a maund.

President —So that actually the cultivator gets about Rs 5 8?

Rai Bahadur —Yes. He spends his labour. He pays the rent for boiling pots, small crushing mills and so on.

President —What has he to pay for those things?

Rai Bahadur —Rs 30 for a season.

President —The season would be how long? Would it be 30 days?

Rai Bahadur —Four months. The cultivator who has rented all those things will not sell his cane. He will make it into gur.

President —What does he pay for pans?

Rai Bahadur —Rs 12 or Rs 15.

President —He would manufacture the gur with his own labour and with that of his wife and children?

Rai Bahadur —Yes.

President —He would not have to pay any labourer for any work?

Rai Bahadur —They generally co-operate with each other.

President —In Pilibhit I suppose if you offered less than 8 annas a maund you would find difficulty in getting cane?

Rai Bahadur —Yes. There is great competition with khandasais. Further if the cultivator thinks that he can get some money by making it into gur, he won't sell his cane. Of course, those cultivators who have taken advances from us at the time of their need would be forced to sell their cane to us. Others would not sell their cane.

President —What is your own opinion? Has the price of gur been going down in the last three or four years?

Rai Bahadur —I don't think so.

Dr Matthal —Have the prices of gur gone up since last year?

Rai Bahadur —Very little difference. There has not been such variation in gur prices as in sugar prices.

President —What percentage of cane is used for making gur? Most of it is used in making sugar and rab?

Rai Bahadur —You mean that the cultivators make it into rab?

President —Yes.

Rai Bahadur —They don't make rab. They only make gur.

President —A good many of them sell their cane to khandasais, don't they?

Rai Bahadur —They sell their juice to the khandasai and he has to establish the boiling pans and everything in that village.

President —Do you think that most of the cultivators sell juice or most of them make gur?

Rai Bahadur —As I told you the cultivators who do not stand in need of advance money and those who are free from debt, do not generally like to sell their juice to khandasais. Having seen their advantage in selling their cane to the sugar factory they are now coming to us to sell their cane, but before this most of them were inclined to make their own gur.

Dr Matthal —Are you able to get all the cane supply that you want for your factory?

Rai Bahadur —Yes. I have managed to get all the quantity of cane that will be consumed in our two factories.

Dr Matthal —I suppose if you are able to pay a price of 8 annas at the factory for the cane, you can get all the cane you want?

Rai Bahadur —Yes.

Dr Matthal —But at any price lower than 8 annas you may not get it?

Rai Bahadur —That is so. They will not be willing to sell it to us at anything less than that.

President—When the khindanis make contracts for juice do they take into account the likely price of sugar?

Rai Bahadur—Yes they do. When it is cheaper they pay less for the juice.

President—But when it is expensive, when it is, say, Rs. 11 or Rs. 15 per maund do they pay higher than 8 annas?

Rai Bahadur—They do. In Palibhat district cane was sold at Rs. 80 per 100 maunds during the War when the sugar rate was Rs. 95.

President—That is 12 annas a maund.

Rai Bahadur—More than 12 annas. I had to pay from 19 to 11 annas a maund for my factory.

President—So that you think that anything which increases the price of sugar will bring more money into the pocket of the actual cultivator?

Rai Bahadur—No doubt. Now cane is the main livelihood of the cultivator. Since the last two years the rabi crop has failed, partly failed and now they depend totally on the cane crop. They do their children's marriage ceremonies, pay rent, purchase bullocks and everything from that.

President—You consider that the cane crop is very important?

Rai Bahadur—Now-a-days it is very important. Before this *sun hemp* was the main cash crop.

President—What has happened to that now?

Rai Bahadur—Cane is taking its place now.

President—The price of *sun hemp* has gone down I suppose?

Rai Bahadur—Yes on account of jute.

President—So that cane is taking the place of hemp?

Rai Bahadur—Yes, and specially for the reasons of our factory. It is very convenient for them to get money at the proper time and nobody has to hire pans and so on. They use their own bullocks for carting the cane to our factory and they charge us for their hire.

Dr. Matthal—What does it cost the grower to cultivate his cane?

Rai Bahadur—Do you mean the Coimbatore quality?

Dr. Matthal—Yes.

Rai Bahadur—This Coimbatore variety costs something more than the *Qeshi* variety.

Dr. Matthal—How much do they get per acre?

Rai Bahadur—Where there are irrigation facilities they get about 400 to 500 maunds per acre and when there are no such facilities and they have difficulty in getting water they get only 200 to 300 maunds.

President—That is where there is no irrigation at all?

Rai Bahadur—Yes.

Dr. Matthal—What do you think it costs them to cultivate an acre?

Rai Bahadur—Coimbatore cane excluding labour costs from Rs. 60 to Rs. 75 per acre.

Dr. Matthal—Including irrigation charges?

Rai Bahadur—Yes.

Dr. Matthal—So that when they get about 8 annas a maund of cane and about 400 maunds per acre, it comes to about Rs. 200.

Rai Bahadur—Yes, but 8 annas a maund includes cartage also.

Dr. Matthal—Has he got to pay any cash for the cartage—because the bullocks are his and the cart is his?

Rai Bahadur—We pay for cartage.

Dr. Matthal—What I mean is, how much has he got to pay in cash for the expenses of cultivation?

Rai Bahadur—Cartage depends on the mileage from the factory.

Dr. Matthan —I suppose most growers have their own carts?

Rai Bahadur —Yes, but they have to engage other carts also, then again ordinary bullocks for ploughing purposes are not strong enough to draw carts carrying loads of 25 or 30 maunds of cane in cuts so they have to purchase stronger bullocks for the purpose.

President —Can you give us any idea of your factory costs? We take it your cost of cane is about 7 to 8 annas per maund.

Rai Bahadur —In our factories this year we hope to crush 15 lakhs maunds of cane and the price of cane comes to about Rs. 7,50,000 and we will have to pay for fuel about Rs. 30,000. Fuel expenses are about 5 to 6 per cent per 100 maunds of cane and in the slack season also we have to spend some fuel so it will come to about Rs. 30,000. Then we require all our establishment for the working season say, 5 months and pay about Rs. 20,000 a month which comes to Rs. 1 lakh for five months and for seven months slack season it is about Rs. 7,000 per month or about Rs. 50,000. Then we have to purchase bags for packing the sugar and it costs us about Rs. 18,000 and things like sulphur, lime, filter bags cloth, engine oil, laboratory requirements and other stores and so on come to an annual expenditure of Rs. 70,000. Commission on sale of sugar is about Rs. 15,000. The total comes to Rs. 10-12,000. For depreciation on both our factories it comes to one lakh of rupees.

President —How have you worked that out?

Rai Bahadur —8½ per cent on machinery.

President —What do you value all the machinery at?

Rai Bahadur —In the new factory it is about Rs. 12 lakhs and in the old factory Rs. 4 lakhs.

President —What percentage do you take of that?

Rai Bahadur —8½ per cent.

President —That is exactly a lakh of rupees. What about depreciation on buildings?

Rai Bahadur —They allow us 2½ per cent on buildings.

President —What is the value of the buildings?

Rai Bahadur —Rs. 3 lakhs in the new factory and 2 lakhs in the old factory.

President —That is Rs. 5 lakhs at 2½ per cent?

Rai Bahadur —Yes, it comes to Rs. 12,500 so that the total expenditure comes to Rs. 11,44,500.

Dr. Matthan —Don't you allow anything for interest on working capital?

Rai Bahadur —We have invested all our own money.

President —How much do you have outstanding in the year?

Rai Bahadur —We have invested about Rs. 20 lakhs in both these factories.

President —How much do you have outstanding in advances and value of sugar in the course of the year?

Rai Bahadur —I think the running capital in our hands is Rs. 7 lakhs to 8 lakhs to purchase cane and accessories and so on.

President —That would be outstanding the whole year?

Rai Bahadur —Yes.

President —We will allow Rs. 50,000 as interest on working capital at about 7 per cent on that. Now then let us take profit, you must have profit on your investment.

Rai Bahadur —If we take sugar at 8 per cent on an average it comes to about 1,20,000 maunds of sugar.

President —Your total value of the capital account is Rs. 21 lakhs, if we allow you 10 per cent on that it comes to 2,10,000 a year.

Rai Bahadur—It does

President—We are trying to work out what would be a fair price to give you your 10 per cent. Actual working expenses, works costs, depreciation on machinery, buildings, interest on working capital and 10 per cent profit would amount in the year to about Rs 14 lakhs

Rai Bahadur—I think there is some mistake. I told you that including running capital it cost us about Rs 21 lakhs. You have calculated Rs 21 lakhs as separate and Rs 7 lakhs as running capital

Dr. Matthai—You gave us these figures for buildings and machinery. You said on the new factory machinery comes to Rs 12 lakhs and buildings Rs 3 lakhs, so that on the new factory your fixed capital apart from the running capital is Rs 15 lakhs. On the old factory your machinery costs Rs 1 lakhs and the buildings Rs 2 lakhs so that on the old factory your fixed capital is six lakhs

Rai Bahadur—That is right

President—You say your output is 1,20,000 mounds of sugar a year in both factories

Rai Bahadur—Yes

President—To give you a fair profit of 10 per cent and cover all your out of pocket expenses you want a price of sugar per mound of Rs 14 lakhs 1,20,000 which is equal to just over Rs 11 9 per mound

Rai Bahadur—Yes. There is the price of molasses to be deducted. Molasses we will get about 60,000 mounds at Rs 2 1 per mound

President—Is that the price you get?

Mr. Badi Narayan—We don't get that but we have got it this year

President—Some of the factories are getting Rs 3 per mound this year

Mr. Badi Narayan—Do they? We don't know

President—We will take it at Rs 2 1, that gives you Rs 1,35,000

Rai Bahadur—Yes

President—Say Rs 1 125, that we have got to deduct from Rs 11 6 leaving roughly Rs 10 8 per mound

Rai Bahadur—We can never sell all our stock at Rs 10 8

President—We are trying to find out at what price sugar should be purchased

Rai Bahadur—Now we are selling at Rs 9 8

President—So you are at present getting only Rs 9 8?

Rai Bahadur—Yes. That is the average of our sale price

Dr. Matthai—You mean this year or last season?

Rai Bahadur—This year it is somewhat cheaper than last year. There is a difference of 4 annas a mound since last year

Dr. Matthai—All the sugar that you made last season was sold before June?

Rai Bahadur—Up to the end of October. Still we have 1,000 bags in stock

Dr. Matthai—What kind of price did you get for your October sales?

Rai Bahadur—This October we were selling our first sugar at Rs 10 8, second sugar at Rs 10 and the third sugar at Rs 9 8

President—Where do you sell mostly?

Rai Bahadur—In the Punjab, Rajputana. Some of it also goes to the Central Provinces

President—What is the railway freight up to Punjab?

Rai Bahadur—It costs about a rupee

Dr. Matthai—Rs 98 is the price at your factory?

Mr. Badri Narayan—Yes, Rs 108 for the first Rs 9-12 will be the average for the whole lot, first, second and third all included. I have given that in our replies to the questionnaire.

Dr. Matthai—Have you replied to our questionnaire?

Rai Bahadur—Yes. It is very difficult now a days to invest such a large capital in such industry. We can get 5 per cent on Government loan on which we have to pay no income tax. You have not deducted about Rs 10,000 being the super-tax from this income.

President—What is the freight advantage you get up here? For example when sugar is selling in Calcutta at Rs 88, at what price would you be able to sell your sugar?

Rai Bahadur—Our Rohilkhand Kumaon Railway is so strict that it never grants any concession to anybody. We have claimed many times. We have often put in an application to the Agent to give us some special rates as they have sanctioned for Cawnpore side, but they didn't allow it.

President—What I want to find out is when sugar is sold in Calcutta say at Rs 9 a maund, how much in excess of that do you expect your sugar to sell at your factory? Sugar is sold in Calcutta at Rs 9. Before it gets up to the Punjab it has to pay one or two rupees railway freight.

Mr. Badri Narayan—Yes, it has to pay Rs 1-14. It enters Punjab through Karnah.

President—When it gets up country it sells at more than Rs 9 say Rs 11. Taking the price at Calcutta at Rs 9, at what price would you expect to sell your output up here?

Mr. Badri Narayan—Say about Rs 108 or Rs 10-12 at the factory.

President—Would you be able to sell at Rs 1-8 more?

Mr. Badri Narayan—We have the same advantage of freight.

Dr. Matthai—Which is your biggest single market?

Mr. Badri Narayan—Punjab.

Dr. Matthai—What places in the Punjab?

Mr. Badri Narayan—Amritsar, Jullunder.

Dr. Matthai—May we take Amritsar as one of your typical markets?

Mr. Badri Narayan—Yes.

Dr. Matthai—What is the freight from Amritsar to Karnah?

Mr. Badri Narayan—It is about Rs 1-12.

Dr. Matthai—What is the freight from here to Amritsar?

Mr. Badri Narayan—About Rs 1, owners risk.

Dr. Matthai—If you were selling in Amritsar in competition with sugar landed in Karnah you would have an advantage say of about 12 or 13 annas.

Mr. Badri Narayan—Yes.

President—Here selling locally in Pilibhit you will have an advantage of Rs 1-8.

Mr. Badri Narayan—We cannot sell in Pilibhit in competition with foreign sugar at Rs 10.

President—Now it is Rs 8-2 in Calcutta. Would you be able to sell at Rs 9-10?

Mr. Badri Narayan—Yes.

President—Your maximum freight advantage at Pilibhit would be Rs 1-12 per maund.

Mr. Badri Narayan—Yes.

President—In the Punjab your freight advantage would be about 14 annas.

Mr. Badri Narayan—Yes.

President—On the average over all your sales what would be your freight advantage over imported sugar?

Dr. Matthai—What proportion of your sugar do you sell in Pilibhit?

Rai Bahadur—Pilibhit dealers purchase it and they also export it to other places. In Pilibhit proper, I think only about one eighth of the whole product can be consumed. They don't use it as they get cheaper sugar from Java. Now that is the position. I have written in my answers to the questionnaire that if foreign sugar is sold at Rs. 10 in ports, this should be kept in view so that the Indian industry can improve and it will get something like that.

Dr. Matthai—What was the average price at the port?

Mr. Badri Narayan—It was Rs. 7-12 last year before the new duty was imposed.

Rai Bahadur—This table we have given for the first quality sugar. In our factories most of it, as you will see from the answer given to question 5, is third quality sugar. We predominate in that.

President—Mostly in third quality?

Rai Bahadur—Yes.

Dr. Matthai—You have not got the average price that you realised for all the qualities in 1929-30.

Rai Bahadur—Last year the average price was Rs. 9-12. I am afraid for this current year it won't come to that. Last year I was selling my first sugar in this month at Rs. 11 and now they are asking my first sugar at Rs. 10-8, 8 annas cheaper than last year at this month.

President—Your second sugar would be Rs. 10?

Rai Bahadur—Yes.

President—And your third sugar would be Rs. 9?

Rai Bahadur—Rs. 9-8. There is a difference of only 8 annas.

Dr. Matthai—Do you keep or maintain your figures of efficiency extraction?

Rai Bahadur—No.

Dr. Matthai—I suppose on an average you crush about 15 lakhs of mounds of cane? You expect to get about 1,20,000 mounds of sugar?

Mr. Badri Narayan—Yes.

Rai Bahadur—It also varies. In November as we have started crushing, it won't give us more than 6 per cent.

Dr. Matthai—On these three days?

Rai Bahadur—We have a separate set of accounts for every 30 days. We close our factory once every 3 weeks for cleaning purposes. Accounts are kept for separate periods.

Dr. Matthai—Do you think this year your extraction may go down to 6 per cent?

Rai Bahadur—In December we will improve. In December it will be about 7 per cent and in January it may reach up to 8 per cent. It varies from 6 to 9 per cent or something more in the end and the average won't come to more than 8 per cent.

President—Does the condition of the crop vary from year to year? Do you have any damage from frost?

Rai Bahadur—No. Sometimes in the winter there are some rains and consequently we suffer.

President—Has your factory ever stopped working one or two days because of want of cane?

Mr. Badri Narayan—Not for the last three or four years.

Rai Bahadur—If it rains in the crushing season, then we have to stop our factory. Cane cannot be brought by bullock carts from 12 or 14 miles distance. The roads are so bad and the carts cannot move on it.

President—Those costs which you have given us, are these based on last year's figures?

Raj Bahadur—Yes.

President—Did you have much rain last year? Did you have to stop your factory on account of rain last year?

Raj Bahadur—No. We have worked the new factory only for about six weeks last year. All these accounts we are giving you are from the old factory.

President—What about this output of 120,000 maunds?

Mr. Badri Narayan—It is for this year for full capacity working.

President—This is your estimate?

Mr. Badri Narayan—Yes.

President—I suppose we should have to make some sort of allowance for contingencies of this sort, rain in the cold weather, breakdown of the machinery occasionally or something which would stop the factory from working, and which might put up the costs.

Mr. Badri Narayan—We have never had any breakdown for the last six or seven years. We have never had such a breakdown as to stop working. It is only a question of hours. We keep spare parts.

Raj Bahadur—We spend much more money in keeping the spare parts.

President—Has your factory been hung up at all this year?

Mr. Badri Narayan—No, only for a few hours. We generally keep duplicate pumps and other spare parts.

Raj Bahadur—We have got a double set of rollers for all our crushing mills.

President—Do you have strikes?

Mr. Badri Narayan—No, never. Labourers here are most contented.

Dr. Matthai—How many days do you work?

Raj Bahadur—135 days.

Dr. Matthai—When do you begin?

Raj Bahadur—From the middle of November. In this period we have a stoppage every three weeks for two or three days for cleaning purposes. We have to clean our boilers. We haven't got so many spare boilers.

Dr. Matthai—You get your cane continuously up to the middle of March or can you get cane up to the middle of April?

Raj Bahadur—Up to the middle of March, that is the utmost.

Dr. Matthai—That is to say about 4 months.

Raj Bahadur—Yes.

Dr. Matthai—A few days for cleaning and so on. So it gives you an average working season of 100 days.

Raj Bahadur—At the most if we carry on, it would be another 10 days. So it would be 110 days.

President—This price for molasses which you got this year of Rs 2-4, have you been able to get in the past?

Raj Bahadur—Last year we got about Rs 2.

President—The year before?

Raj Bahadur—It was very low. We were selling at Rs 1-8.

President—Looking forward to the next seven years, what would be the fair price on which you could calculate for your molasses? You are turning out more molasses than before?

Raj Bahadur—Yes, including both the factories.

President—What sort of price, could you expect to get?

Mr. Badri Narayan—We don't think that we can get more than Rs 2 in any case.

President —But in the future are you likely to get as much as Rs. 2?

Mr. Badri Narayan —There is very little chance of getting Rs. 2.

President —What would be the price for the next 7 years? Sometimes in Java and in other countries molasses is taken out to the sea and thrown away.

Mr. Badri Narayan —It is due to Java that we cannot get a good price. They ship any amount of molasses to this country.

President —What do you think about the market? Is it used for tobacco?

Mr. Badri Narayan —Yes.

President —Your proximity to Nepal where people smoke a lot, does that give you some advantage?

Mr. Badri Narayan —Very little goes to Nepal.

President —What is the reason for this sudden increase in the price of molasses? Whom do you sell your molasses to?

Mr. Badri Narayan —We sell it to the Cawnpore dealers.

President —You mean molasses dealers?

Mr. Badri Narayan —Yes.

President —What do they use it for?

Mr. Badri Narayan —They sell it to petty dealers of tobacco. They do not sell it to distilleries anyway.

President —What is it used for? For curing local tobacco?

Mr. Badri Narayan —Yes.

President —Is there more local tobacco used this year? Is the demand connected in any way with the *swadeshi* movement?

Mr. Badri Narayan —I don't think so.

President —People are smoking a lot more *biris* than they used to?

Mr. Badri Narayan —They don't use molasses in *biris*.

Dr. Matthai —Is molasses used in the preparation of smoking *biris*?

Mr. Badri Narayan —It is used in *hooka*.

President —And *chelum*?

Mr. Badri Narayan —Yes.

Dr. Matthai —Are people smoking more *chelum* and *hooka* than before?

Rai Bahadur —Yes. They are leaving the habit of smoking *cigarettes*.

President —Why has your price of molasses gone up?

Rai Bahadur —I don't think that this new habit has affected the price of molasses. We were told that some big dealers of Cawnpore had joined together in order to keep up the price because they had purchased their molasses at a higher level from the Gorakhpur side.

President —This is the result of some combine?

Rai Bahadur —Yes.

President —People who are outside the combine in order to make certain of getting molasses have been offering higher prices?

Rai Bahadur —Yes.

President —Over a series of years, this high price is not likely to continue?

Mr. Badri Narayan —Absolutely not. We were expecting to get Rs. 2.12 for our molasses. So we did not sell when we were offered a slightly higher price a month or so before. But then expecting a downward tendency in price—thinking that the price would not be at this level for long—we had to sell it at Rs. 2.4.

President—Let us suppose as a result of the recommendations of the Tariff Board the number of sugar factories increased considerably—say another 50 sugar factories were established in the next four or five years—what sort of price would you expect for your molasses?

Mr. Badri Narayan—Very low price. Unless the Java molasses is stopped it will very seriously affect the molasses price here.

President—Do you think that Rs. 1-8 would be the average for seven years?

Mr. Badri Narayan—Yes.

President—You are getting Rs. 2-1.

Mr. Badri Narayan—Yes.

President—If you got Rs. 2-1 for two years and one rupee for the rest of the time, the average would be about Rs. 1-8.

Rai Bahadur—We have stated in our replies to the questionnaire that the average price will be Rs. 1 for molasses.

President—At any rate it would not be too high if we took Rs. 1-8 as the price of molasses.

Rai Bahadur—If the Java molasses were to come, we would not get Rs. 1-8. Unless the import of Java molasses is curtailed, it is impossible to get Rs. 1-8.

President—Java molasses does not come up here?

Rai Bahadur—It does not come up here, but it goes to the very dealers to whom we send.

President—Java molasses at present is being landed at Rs. 3.

Mr. Badri Narayan—That is solidified. They make a larger profit out of the solid molasses.

President—Even so, the price is at a higher level. Java molasses is very expensive. It is partly on account of that the price of Indian molasses has gone up.

Rai Bahadur—Now gur is being imported into India.

Dr. Matthai—Very little.

President—People tell us that it is being imported, but we find it very difficult to get a sample.

Mr. Badri Narayan—Samples we get many. But I do not know particularly which factory has got it for refining purposes.

President—I know that it has been imported into Lucknow for refining purposes this year.

Mr. Badri Narayan—Yes.

President—But for eating purposes very little?

Rai Bahadur—People do not like the flavour of it. I am afraid that if gur is also allowed to be imported from Java, the sugarcane crop will go out like the indigo crop. This is the only crop on which these poor cultivators live.

President—If the price of molasses were to drop to Rs. 1-8 or even lower, it would affect your position considerably?

Rai Bahadur—It will.

Mr. Badri Narayan—Further the market for molasses is uncertain.

Rai Bahadur—The khandsaris have no big tanks to keep the molasses and have to sell it at once. I don't think that they will sell it at more than Rs. 2 in this working season.

Dr. Matthai—Is all your molasses sent to Cawnpore?

Mr. Badri Narayan—It is not sent to Cawnpore. It is purchased here by the contractors of Cawnpore.

Dr. Matthai—But the main dealers are in Cawnpore?

Mr. Badri Narayan—Yes.

Rai Bahadur—In Agra as well

Mr. Badri Narayan—Some six or seven years ago we were selling our molasses to the Rosa factory for distilling purposes. Since then they have refused to purchase and we are selling it to these dealers.

President—They don't do any distilling or very little.

Mr. Badri Narayan—They do very little because it does not give them any profit.

THE PUNJAB SUGAR CORPORATION, LIMITED.

**Oral Evidence of Mr OWEN ROBERTS recorded at New Delhi, on
Wednesday, the 12th November, 1930**

President—Mr Roberts you are the Chairman of the Punjab Sugar Corporation?

Mr Roberts—Yes

President—That Corporation is connected with Sonapat Sugar Factory?

Mr Roberts—Yes

President—Is that the only factory which they have?

Mr Roberts—Yes

President—So that the Corporation was formed in connection with this factory I suppose?

Mr Roberts—Yes

President—The firm of Messrs Owen Roberts are the managing agents at present?

Mr Roberts—No. We were managing agents until about a month ago, we have now handed over the managing agency to the Amritsar Distillery Company Limited, a private Limited Company

Dr Matthai—Yours is a public company?

Mr Roberts—No, a private Limited Company

Dr Matthai—Registered here in India?

Mr Roberts—Yes

President—What is its position as regards the Punjab Government? Is the Punjab Government interested in any way?

Mr Roberts—Not exactly. We really do a very large amount of Government work and I am responsible for the purchase of produce for the army. I am a Member of the Punjab Council. When the scheme came up I naturally took part in it. That is how my connection came about with the Sugar Corporation.

President—When was the Sugar Corporation registered?

Mr Roberts—About two years ago.

Dr Matthai—What is the total authorised capital?

Mr Roberts—Rs 10 lakhs

Dr Matthai—And the paid up capital?

Mr Roberts—About Rs 6½ ordinary shares issued and Rs 1½ lakhs Government 6 per cent preference shares.

President—So that Government has an interest in the Punjab Sugar Corporation?

Mr Roberts—Yes and they are committed to take up Rs 25,000 of preference shares for every lakh of ordinary shares we sell.

President—Your authorised capital is Rs 10 lakhs of which Rs 8 lakhs is ordinary and Rs 2 lakhs preference shares, in the proportion of 4 to 1 and Government has guaranteed that it will take up Rs 2 lakhs of preference shares in this proportion as and when the ordinary shares are issued. So that you have Rs 6½ lakhs ordinary shares issued at present and Government has taken a lakh and a half?

Mr Roberts—We have got to complete the issue of each Rs 1 lakh before they take up Rs 25,000 worth of shares.

Dr Matthai—By whom is the share capital held?

Mr Roberts—The Punjab Government is holding it entirely in their charge.

Dr Matthai—I noticed in the papers that the shares were transferable by Government and were to be handed over either to cane-growers or a society of cane-growers

Mr Roberts—I am averse to Government giving away the share holdings but I think Government ought to use the revenue arising from it for payment to persons who deliver cane to the factory by way of bonus

President—It was Mr Noel Deerr's suggestion to hand it over to co-operative societies?

Mr Roberts—Of course the best scheme is that laid down in the Sugar Committee's report

Dr Matthai—But the original idea of the Punjab Government was to put it definitely on a profit sharing basis?

Mr Roberts—That is an open question. The only engagement the Government made in the matter was that they would use their share capital to facilitate the delivery of cane to the factory

Dr Matthai—But the precise form in which it was to be done was left open for consideration?

Mr Roberts—The Government were not committed on that point

President—The Sonapat factory has not started operations yet?

Mr Roberts—We hope to have a trial on some *gur* about the end of this month

Dr Matthai—Have you any Government Directors on the Board?

Mr Roberts—We have two. We have 15 ordinary directors and of those 15 five or six form a small working committee

Dr Matthai—How is Government represented on the working committee?

Mr Roberts—We always put a Government director on it

President—Of your Directors how many are Indians?

Mr Roberts—They are all Indian except myself

President—Do they represent any particular class?

Mr Roberts—We have got a few businessmen amongst them and I think the rest are either lawyers or gentlemen of private means

President—What about the zemindars or cultivators?

Mr Roberts—We have men from that side, although they may be lawyers also. For instance there is Mr Chhotu Ram. He was a former Minister of Agriculture in the Punjab and is the leader of the agricultural party in the Council. He is a member of the Board of Directors

President—Is there any direct representative of cane-growers?

Mr Roberts—We have got one man from Rohtak district. It is rather difficult to have a direct representative of cane-growers because even this one director does not understand English

President—You say the factory has not yet started work so that anything you tell us is based on mere estimates?

Mr Roberts—Yes

President—Can you give us any information about the price of cane in the locality?

Mr Roberts—That is the whole difficulty. We have not got down to it. I am anticipating that throughout the Punjab there may be great difficulty in getting cane, the production is only equal to the demand on it for making *gur*

President—What is the capacity of your factory?

Mr Roberts—250 tons of cane a day and we estimate a working season of 100 days

Dr Matthai—That is about 2,500 tons of sugar a year roughly?

Mr Roberts—Yes

President — You anticipate great difficulty in getting your cane supplied this year?

Mr Roberts — Yes

President — What are you offering for cane at present?

Mr Roberts — We want to start out on a basis of 0 0-0 to 0 0 6 if possible

Dr Matthai — Delivered at the factory?

Mr Roberts — Yes

Dr Matthai — And you think it is doubtful whether you will get it?

Mr Roberts — That is so perhaps we may have to pay 8 annas

Dr Matthai — Mr Noel Deeri has estimated that 6½ annas would be sufficient to divert cane from *gur*

Mr Roberts — I think he is talking with regard to his experience in the United Provinces and Bihar. I don't think he realises the difficulty in the Punjab and that is that our cane production is only equal to the requirements of our *gur* consumption

President — I suppose the actual cost of producing cane is 4½ annas?

Mr Roberts — He is taking that figure from an official report

President — But would you consider that cost of production of cane too low or too high?

Mr Roberts — Mr Milne could tell you more about that because he has got certain areas under cane in model farms and Government controlled farms

President — What is the price of *gur* at present?

Mr Roberts — This matter is very important. The Punjab *gur* is all eating *gur* and none fit for making sugar. The demand for this high class *gur* is so high that even the jails insist on importing *gur* from Peshawar. We have paid prices as high as Rs 6-14, Rs 7-8 and Rs 8 a maund for Peshawar *gur*

President — What do you pay for the local *gur*?

Mr Roberts — We have both to buy and sell it, we sell it to Government. We sold *gur* on the 30th April Rs 5 6 ex Gajniwala

President — Let us take the Punjab *gur* at Rs 5 6

Mr Roberts — In September the price of the old crop was between Rs 4-2 and 4-4

President — Would that be fit to eat?

Mr Roberts — Yes. But it is no use trying to make sugar out of it

President — What do you think would be a reasonable figure to take in the Punjab?

Mr Roberts — I should say in Sonapat Rs 5 6 to Rs 5-8

President — Let us take Rs 5 4 for the sake of argument. Out of that before the cultivator gets his price there must be something going out as commission

Mr Roberts — Yes. There is the usual *mandi* commission

President — Could you give us some sort of idea of that?

Mr Roberts — At Rs 5 about 4 annas will be the commission

President — Supposing the cultivator's labour and his bullocks' labour were included what would be his out of pocket expense for making *gur*?

Mr Roberts — Here the charge for the mill is not very high

President — We were told that this was fairly high, the mill and the pans

Dr Matthai — I think Mr Abdullah considers that it varies from Rs 20 to Rs 7-4

Mr Roberts — We could hire a mill and pans for Rs 6 4. That is Mr Noel Deeri's estimate

Dr Matthai—He is rather on the low side but taking his figure of Rs 8-4, that would be for a season of how many days?

Mr Roberts—Mr Noel Dorr puts it down at 2 annas per maund of cane or Rs 1-4 per maund of *gur*.

President—That is very much on the low side. Most provinces have given almost double that figure with the charge for bullocks it amounts to as much as Rs 2, Rs 2-4 and Rs 2-8 in other places.

Mr Roberts—I would not attach much importance to these figures unless they are backed by Mr Abdulla.

President—The items on which the cultivators have to incur expenditure are I suppose the hire of the mill, the pan and oil and a certain amount of labour. He has sometimes to employ one man extra and there is the cost of erecting the furnace which has to be erected each year. These are his out of pocket expenses I suppose?

Mr Roberts—Yes.

President—Could you give us any sort of idea as to what it would cost?

Mr Roberts—Mr Milne would be able to give you these figures. Gajargola is a fair run by the irrigation people and they could give you the actual figures.

President—At any rate let us take 12 annas for our purposes, that would leave Rs 4-1 as the actual receipt by the cultivator.

Mr Roberts—Yes.

President—That is 68 annas. Assuming that 10 maunds of cane go to one maund of *gur*.

Mr Roberts—I put it at 11 maunds.

President—That will give just over 6 annas. Let us say 6 annas is the price at which the cultivator might possibly sell to the mill. Then you have certain other additions to make, e.g., the cost of transport to the mill.

Mr Roberts—At 6 annas you bring other forces into play such as the money lender, the man who hires out the pan, all these people are very keen on seeing that *gur* is made.

President—What is the margin you think should be allowed for that?

Mr Roberts—I want to see a bonus of 2 annas a maund paid for a few years to break this habit of making *gur*.

Dr Matthai—I suppose 8 annas a maund of cane would be sufficient to ensure your getting *gur*?

Mr Roberts—Yes.

Dr Matthai—Actually you have made arrangements for the supply of cane this year?

Mr Roberts—Government have to take a part in that and we have got a man out.

Dr Matthai—When are you expecting to start work?

Mr Roberts—Next month.

Dr Matthai—And the arrangement for the supply of cane has not been made yet?

Mr Roberts—No. No definite contracts have been entered into.

President—You are offering 6 annas?

Mr Roberts—Yes.

President—Supposing your suggestion was accepted and a 2 annas bonus over the *gur* parity price was offered would you still have to pay some charge for delivery at the mill?

Mr Roberts—No. We have got a lot of cane right round our factory and there is no competition. I think the production is twice as much cane

as the mill can grind from within a five mile radius and 6 times as much from within a 10 mile radius. What we hope is that he will bring the cane into the mill in his own cart.

President—And you think a flat rate of 8 annas at the mill would be sufficient?

Mr. Roberts—Yes.

President—That of course is really not more than what the U. P. factories are paying for their cane. They are paying between 7 and 8 annas delivered at the factory and, as you know, some of the factories bring their cane a 100 miles by rail and that of course is very expensive.

Mr. Roberts—The position is that they have 1½ million acres under cane and we have an average of 100,000 acres and therefore you have definitely cane there which is surplus to the gur requirements of the province whereas Punjab has no such cane.

President—When you get the improved types of cane extended then you will probably not only have sufficient gur for your province but a surplus.

Mr. Roberts—That remains to be seen.

President—Taking the moderate estimate of the Agricultural Department they say that Coimbatore canes give 50 per cent increase in the yield and under favourable circumstances as much as 300 per cent. If you take only 50 per cent, it will give you a large exportable surplus. What are you going to do with it?

Mr. Roberts—I am not sure it would. You would increase your gur a bit but you would not increase it to anything like 50 per cent, because making gur is very wasteful.

President—That waste continues now. Accepting the same method of production of gur, you increase the quantity by about 50 per cent.

Mr. Roberts—That will take a long time to bring about.

President—What sort of period do you think would be necessary?

Mr. Roberts—Take the Punjab wheat area with which I am pretty familiar. We have been at it for the last 20 or 25 years and selected types of wheat are not grown all over the Punjab.

Dr. Matthei—I find as far as Coimbatore cane is concerned about four years ago your acreage under improved cane was not over 5,000 acres.

Mr. Roberts—Yes.

Dr. Matthei—But now I find it has gone up to very nearly 60,000 to 70,000 acres in the Punjab. If Coimbatore canes are going to be introduced at that rate you might expect fairly rapid progress.

Mr. Roberts—I have not noticed any great cheapening in the price of gur as a result of that.

President—There is in the United Provinces a marked decrease.

Mr. Roberts—I can buy gur cheaper in the United Provinces and find it at Sonapat, than I can purchase gur locally.

President—In the area which lies within your radius is there Coimbatore cane grown largely?

Mr. Roberts—Round about where we are?

President—Yes.

Mr. Roberts—I believe there is. I have got a complete list of the varieties grown there. Some of the varieties are quite good. I think there is a big Government farm at Karnal—Government of India Demonstration Farm.

President—How many miles is that from your farm?

Mr. Roberts—It is quite close to us. Karnal from Delhi is about 40 miles. Sonapat from Delhi is about 17 miles.

Dr. Matthei—You have no idea to what extent the area now accessible to you in Sonapat is under Coimbatore cane?

Mr Roberts—No

Dr Matthai—You think it is very little just now?

Mr Roberts—I don't think there is very much of it

Dr Matthai—Is the factory making any definite arrangement for getting Coimbatore canes introduced in that area?

Mr Roberts—We can't do anything of that sort until such time as we get going. I did want to take up sufficient land to grow our own demonstration cane and give the sets away. It is extremely difficult. We can't get the land or ask Government to acquire it. It would be very expensive.

Dr Matthai—What is the kind of cane that you have there now in the main?

Mr Roberts—There again I can't tell you off hand. I have not come prepared to answer that question.

President—Do you consider that in any scheme of protection an attempt should be made to secure for the Indian factories such a price for their sugar as will enable them to do a considerable amount of demonstration and propaganda in the way of distributing the setts and so on?

Mr Roberts—I think if you introduce it at all you will have to give a guarantee that protection will be for a number of years, otherwise people are not going to put up money for factories. The main object of it ought to be to increase the number of factories. Whatever type of propaganda you may use you have got to increase the production of sugar until it is sufficient to meet the needs of the country.

President—One of the objects to be secured is that the cultivator grows a good cane.

Mr Roberts—That comes along with the rest. Naturally a factory would be interested to get the best type of cane grown round it, but in the Punjab the problem goes still further back. Until you can break the habit of making *gur*, the chances of sugar manufacture are not at all good.

President—If there is a decrease in the price of *gur*, I suppose the decrease in price will break the habit to some extent. You may get *gur* from the United Provinces and sell it in Punjab at a low cost.

Mr Roberts—It is no good for the Punjabi. He won't eat it. If you take a tract where the United Provinces and the Punjab boundaries run side by side, Muzaffarnagar and Meerut districts—it is all fine eating *gur*. Nobody dreams of buying it for making sugar. It is totally unsuited for that purpose. On the other side of the river the same thing is happening. Our eating *gur* is not as good as Muzaffarnagar *gur*.

President—Why is the finest *gur* produced in Meerut?

Mr Roberts—Peshawar is always regarded as very much better.

Dr Matthai—What I still don't understand is this. You are now within a month of starting the factory. On what basis do you propose to provide yourself for 100 days with the supply of cane that you want?

Mr Roberts—We are going into the open market for it. We are hoping that Government will do something to assist the delivery of the cane at the factory.

President—What will Government do?

Mr Roberts—That is what I want to know.

President—Have you seen any Government orders on the subject?

Mr Roberts—I have discussed this question with the Minister and he will probably be able to tell you something on the subject.

President—What sort of price at present prevails for sugar?

Mr Roberts—Sugar was selling the other day at Rs 11-12 per cwt for Karachi. The freight from Karachi to Delhi is Rs 1-4.

President—Rs 13 a cwt?

Mr Roberts—Yes

Dr Matthai—It comes to Rs 10 a maund

Mr Roberts—Yes Freight from Delhi to Sonapat is annas 2 You have got to take all the charges (manufacturing and selling charges) off that

President—This is in Lahore?

Mr Roberts—I sold it for , Karachi

President—What is your market in Sonapat?

Mr Roberts—Delhi only Delhi could quite easily absorb the whole production of our factory

President—What would be the cost of imported sugar in Delhi?

Mr Roberts—Karachi to Delhi is Rs 1-4 a maund

President—It would cost you about Rs 2 a maund to take it to Delhi?

Mr Roberts—Yes

President—Your nett proceeds would be about Rs 9-11?

Mr Roberts—Yes

President—It is about Rs 8-5 a maund now for Calcutta

Mr Roberts—I never take the maund price I sell it in cwt I sell it according to steamers due for arrival

President—You have not worked this factory and it is very difficult to say what your costs are going to be?

Mr Roberts—As a matter of fact before I handed it over, I worked out the cost of refining very very closely I haven't got those figures with me From those figures one might get a fair idea of what the crushing cost would be I am calling for the necessary data to get out *pro forma* crushing costs

President—Would the refining costs give you a good guide as regards the cost of manufacturing sugar?

Mr Roberts—We have got our rollers to work We use coal in refinery, but against that we have to use a certain amount of wood when the rolling mills are in use

Dr Matthai—You are paying more for your raw material?

Mr Roberts—I am taking the charges apart from the cost of raw materials

Dr Matthai—You are simply taking the cost above material?

Mr Roberts—Yes, the cost of running the factory

Dr Matthai—You have no crushing charges in that?

Mr Roberts—We use only 10 or 15 per cent extra fuel

Dr Matthai—Some of the factories use none at all

Mr Roberts—If the stories I hear about the Punjab cane are correct, there ought to be no need for fuel

President—I understand there is a very high percentage of fibre

Mr Roberts—Yes We have got the best plant that can be bought There is nothing like it in India It is the only 17 roller factory which is worked by one engine I believe there is another which has been built up from 11 to 17

Mr Rahimtoola—They did give me the name of the place, but I forget the name at the moment This factory has been designed and erected as a 17 roller factory?

President—That is in accordance with Mr Noel Deerr's advice, because the cane that you are growing is not particularly good and therefore you want this type of machinery?

Mr Roberts—He suggested 14 rollers and afterwards 17 rollers I have taken 17 rollers straightaway I have put in 4 pans instead of 8 pans as advised by him

President—How does this price of Rs 9-11 nett strike you and your fellow Directors?

Mr Roberts—There is not going to be money in it. We can't make money out of it.

Dr Matthai—Apart from the cost of sugarcane, do you think that Mr Noel Deon's estimate of cost above material would be more or less realised?

Mr Roberts—The note was written so long ago—about 1926. I think the conditions are very considerably different now.

Dr Matthai—What is your total capital expenditure?

Mr Roberts—About Rs 10 lakhs.

Dr Matthai—Supposing you made allowance for that, Mr Noel Deon bases his estimate on Rs 7½ lakhs.

Mr Roberts—Our block account would not exceed that.

Dr Matthai—That is accepted. As regards the rest of the figures there could not be any very substantial alterations in that since 1926.

Mr Roberts—I should be very glad if these figures came out, because in addition to allowing 16½ per cent profit, he has allowed himself 5 per cent interest which raises the figure to 21½ and 7½ per cent depreciation and 5 per cent sinking fund. Taking it all round the cost of sugar must work out to next to nothing, if these figures are correct. They are certainly on the low side. He has taken the selling price of sugar at Rs 12 a maund.

Dr Matthai—Leave that out for the time being. I am trying to see what is likely to be the cost of manufacture above the cost of material. Have you made any estimates?

Mr Roberts—It would be merely a guess. One would have to work it out. I have got it worked out very carefully in the case of gur.

Dr Matthai—What is the measure of protection that you want?

Mr Roberts—I haven't got the data here to answer. I shall have to get them.

President—Your Directors have not considered this particular point?

Mr Roberts—No. We have considered it very fully in the matter of our refining using the plant for refinery purposes.

Dr Matthai—Can you refine as well in this factory?

Mr Roberts—Yes.

President—Do you contemplate refining at all?

Mr Roberts—We put down the refinery, because the extra cost was very low.

President—We could not assist you so far as your gur refining plant is concerned. Whatever protective duty we might put on it would not help you.

Mr Roberts—It would be the same if it put up the price of sugar.

President—The cost of refining gur into sugar is high.

Mr Roberts—In March I bought gur at Rs 5 a maund delivered at Sonapat.

Dr Matthai—Can you tell me approximately how much the gur cost would be per maund of sugar?

Mr Roberts—I am afraid not. I must have figures with me.

President—At that price in the case of one refinery of which we examined the costs it comes to Rs 12 per maund of sugar.

Mr Roberts—With regard to that if we could run the factory on gur barely paying the establishment and things of that sort, we would run it to reduce overhead charges more than anything else. It is not a paying proposition.

Dr. Matthai—If you were doing anything but refining, what would be your capacity? Could you make the same amount of sugar, 2,500 tons?

Mr. Roberts—I haven't got those figures with me. I can give you all the information at the factory.

President—Could you answer this question? You were saying that Punjab *gur* is no use for refining.

Mr. Roberts—Yes.

President—Where do you get your *gur* from?

Mr. Roberts—I have tried all sorts of places. I have got samples from quite a dozen different districts.

President—In the Punjab?

Mr. Roberts—Yes. We tried round about Sonapat and had samples from Ludhiana and elsewhere and also a few tests made of the Chakrawali from *gur*.

President—What is the trouble? Is it due to low sucrose content?

Mr. Roberts—Some of the best is about 38 per cent.

President—That is very poor.

Mr. Roberts—The buying standard is 45. That is the minimum.

President—In the United Provinces they get about 45 per cent.

Mr. Roberts—45 to 50 per cent.

President—In that case it would be very difficult for you to use the Punjab *gur*.

Mr. Roberts—Yes.

President—What is it due to? Is it due to the quality of the cane?

Mr. Roberts—I have discussed this point with Mr. Milne, who has gone very deeply into it. He seems to think that it is due to the system of manufacture adopted. Eating *gur* is manufactured as such, whereas the *gur* imported from the U. P. that I am getting is not eating *gur* but is only fit to be turned into sugar and it does not look like eating *gur*.

President—Is it black?

Mr. Roberts—Yes.

President—I suppose it is due to the different process of clarification which they adopt. They don't use lime for eating *gur* but *bundi*.

Mr. Roberts—Yes, I gather they heat it too much or something of that sort.

Dr. Matthai—Are you fairly certain of starting your factory next month?

Mr. Roberts—I hope so. But we do not expect to make money out of it just now. It has never been done up here before. We could make elaborate contracts with the Punjab cultivators for the delivery of cane but they would not keep them. If they did not want to deliver the cane, they would not do so. It is a matter of luck if they do. If we can get the quantity we want we can carry on. It is all a question of habit which we have to establish. I think it is also largely a question of price, and we cannot afford to pay the necessary price.

Dr. Matthai—You are counting on a working season of 100 days?

Mr. Roberts—Yes.

Dr. Matthai—Is it possible to work up to that in an area like yours?

Mr. Roberts—It is possible.

Dr. Matthai—What about the frost problem?

Mr. Roberts—Other people have dealt with it. It is not so serious in that part of the country.

Dr. Matthai—How do you get your 100 days? When would you start?

Mr. Roberts—I think we ought to be able to start early in December.

Dr. Matthai—December, January, February and I suppose till about the middle of March?

Mr Roberts—Yes, and we might go on till the end of March

President—Mr Noel Deon has said that you could work till the middle of April

Mr Roberts—There may be some difficulty. The physical conditions round about here are more those of the United Provinces than of the Punjab

President—You are not very far from Meerut?

Mr Roberts—No. (Showed the paragraph in Mr Noel Deon's report in which is discussed the frost problem)

President—Do they do any windrowing?

Mr Roberts—I do not know whether it pays to do that. The frost only lasts for a few days at the most

Dr Matthai—What time of the year does it occur? Does it occur at the end of January?

Mr Roberts—Some time in January. Unless we can get assistance from Government which will enable us to pay a premium on cane deliveries, I think the manufacture of sugar in the Punjab may be impossible

Dr Matthai—Precisely what is the kind of assistance from Government that you are thinking of?

Mr Roberts—They talk of using the income of these shares. If a further tax is put on sugar and that is utilised as a subsidy to the provinces, that is to say, if that revenue is handed over to the provinces to develop the manufacture of sugar in cases where factories are found to be working efficiently, Government might arrange to pay a premium on the cane crushed by each factory

President—There is a technical difficulty in handing over the revenue of the Central Government to the provinces under the Devolution rules

Mr Roberts—Could not that be overcome? Take for instance the petrol tax. It has been surmounted there. The petrol tax is distributed to the provinces

President—It is distributed through the Road Board

Mr Roberts—Yes. They could put up a small office and call it a Sugar Office

President—You suggest that the Imperial Council of Agricultural Research could receive a proportion of that?

Mr Roberts—Any authority that is competent to distribute it

Dr Matthai—Supposing the Research Station at Karnal was developed by means of a grant from the Imperial Council and you got your improved seeds free from Karnal which you might distribute among your growers in this area, would that assistance be sufficient for you?

Mr Roberts—I don't think so

Dr Matthai—Over and above that you want to be able to give a premium on cane deliveries?

Mr Roberts—Yes, we have to attack *gur*

Dr Matthai—What is the concrete assistance that you want? There is the distribution of improved seeds free from the Research Station. That is one form of assistance, and you want something over and above that?

Mr Roberts—Yes

Dr Matthai—I take it that you want some contribution which will enable you to distribute bonuses among growers. Is that your idea?

Mr Roberts—Yes, on the quantity delivered at the factory

Dr Matthai—Supposing in estimating what would be a fair price for sugar made in your factory we took into account the price of cane which would be sufficient for you to give a fair price to the grower and a small bonus, then it would not be necessary over and above that to have a contribution?

Mr Roberts—No, so long as you put us in a position to pay the growers say 8 annas a maund of which the factory must contribute so much

Dr Matthai—If you get a price for your sugar which is based on a cost of 8 annas per maund for cane, then nothing more is necessary?

Mr Roberts—I don't think so and I think that assistance would only have to run for a few years until you break down the system of making *gur*. Once we get the growers into the habit of making over their cane to the factories, they would not make *gur* afterwards

President—Would 7 years do for that purpose?

Mr Roberts—I should think so

Mr Rahimtoola—You want to pay an attractive price in order to dissuade the growers from making *gur*?

Mr Roberts—Yes. I see no other way. It is no use my putting down a dozen factories. If I do, I shall get more and more into the mire unless I can get cane. The building of a factory is not the problem to start with in the Punjab. If we know that we can pay a price which will take the cane out of the *gur* maker's hands, then I think that the factories would follow immediately

Dr Matthai—You cannot do that without first having a factory. You cannot break the *gur* habit until you start with a factory

Mr Roberts—That argument applies to any form of assistance. One cannot naturally produce sugar without factories

President—Provided you got deliveries of cane at a reasonable price and a fair price for your sugar, there is scope for the expansion of factories?

Mr Roberts—I think there is. I want you to read this (handed in). The Army used to have nothing but *gur* at one time. The subject was very carefully gone into. It did not matter how carefully it was purchased, there was always a heavy loss because the *gur* deteriorated in store and it was impossible to get a standard on which to buy it. They have had innumerable difficulties. I was not concerned in the supply myself but I went into it for Government. Then we went into the question of small cakes moulded for rations and tried Peshawar, Chaudhary and various other places where this could be done, but the cost was prohibitive. So, it was finally decreed to buy sugar for the Army. The Army did not object. They were very pleased to get sugar. In the same way the ordinary *gur* eater would be pleased to get sugar.

President—Perhaps in towns and not in villages?

Mr Roberts—Everywhere. These rations for the Army come from villages

President—What was the difficulty? There was constant loss, was that it?

Mr Roberts—Yes

President—Was that a loss to the Army?

Mr Roberts—Yes

President—Owing to deterioration of *gur*?

Mr Roberts—Yes. There was no possible way of working it. I was not concerned in supplying it. I had nothing to do with it. I went with the officers on tour and looked into the subject with them. It was a terrible stuff to handle

Dr Matthai—Is the whole Indian Army supplied with sugar?

Mr Roberts—Yes, with Java sugar

Dr Matthai—What quality?

Mr Roberts—They took brown. I have known a time when white sugar had to be delivered as they could not buy brown

Dr Matthai—That is interesting

Mr. Roberts—I want to stop the manufacture of *gur* entirely. That is where the loss comes in.

President—Do you want to prohibit the manufacture of *gur*?

Mr. Roberts—You cannot prohibit the making of *gur*, but I want to make it impossible for *gur* to be manufactured.

President—Have you any suggestions?

Mr. Roberts—Put the man who can make sugar in a position to pay a price for his cane where the agriculturist will not be so foolish as to make *gur* out of it.

Dr. Matthal—In that case you would more or less like to have all the cane in the Punjab used for the manufacture of white sugar?

Mr. Roberts—Why not? It could be used for the manufacture of white or brown sugar. The economic difference to the people would be enormous.

Dr. Matthal—Except this when you have a very severe depression in the sugar industry and you get cheap imports from Java.

Mr. Roberts—There is no country in the world except India and perhaps China which has got 300,000,000 customers of its own. You may have all the depression you like and yet if there are 300,000,000 consumers in the country, it is not going to affect this country. All that you have to do is to try and prevent dumping.

President—That is rather a big problem.

Mr. Roberts—That is one of the problems we have to face. We are facing it in other things. We are trying to face it in wheat.

President—Not with much success?

Mr. Roberts—We have not approached the problem properly. The remedy is quite simple.

Dr. Matthal—Is there any cotton grown in the area where your factory is situated?

Mr. Roberts—I could not tell you that. There is a lot of cotton grown round about Rohtak, but I don't think I have noticed anything round about Sonapat.

Dr. Matthal—Perhaps the Director of Agriculture will be able to tell us.

Mr. Roberts—Yes.

President—Your view is that the difficulty in which white sugar finds itself is due not so much to the imports of foreign sugar as to the alternative of *gur*.

Mr. Roberts—I am not talking of India as a whole. I confine myself to the Punjab and so far as that is concerned, that is my opinion.

President—So far as the Punjab is concerned, the import of white sugar from Java presents no great difficulties?

Mr. Roberts—No.

President—Provided we put on a sufficiently high duty to protect the country from dumping?

Mr. Roberts—Yes. I was talking to a representative of Andrew Yule's the other day. They have a factory at Savan.

President—Yes, the New Savan Sugar Factory.

Mr. Roberts—For years and years they did quite a good business in the Punjab. They cannot do anything now.

President—Why?

Mr. Roberts—Because of Java they have not been able to make any sale for the last two or three years.

President—Where are they selling then?

Mr. Roberts—It is all going to Calcutta. It is not sold up here. It has narrowed the market for those people.

Dr Matthal—This idea of a sugar factory in the Punjab has been long under consideration?

Mr Roberts—Yes. It has been played with for a very long time.

Dr Matthal—There must have been a good deal of careful investigation by the Government Departments.

Mr Roberts—They have investigated and reinvestigated it. So far as we are concerned we have put up the money and regard it as an experiment.

Dr Matthal—Has Mr Milne been Director of Agriculture all the time?

Mr Roberts—He has been Director of Agriculture for a number of years. Everybody who investigated the subject regards the prospects of a factory as very good, but then we have initial difficulties to get over. The chief difficulty is the getting of cane. There is no secret about the manufacture of sugar. You can easily get the plant.

Dr Matthal—Which again is simply a question of the price that you can offer for the cane?

Mr Roberts—Yes.

Mr Rahimtoola—There is sufficient cane to maintain the industry?

Mr Roberts—As I say within a five mile radius of this factory there is twice as much cane as the factory could use and within a radius of ten miles there is six times as much cane as the factory could use. These are Government figures taken over a long period of years.

Mr Rahimtoola—You are definitely then for a policy of protection I take it?

Mr Roberts—Yes.

Mr Rahimtoola—Without which you don't think that the industry in India would thrive or that the capitalists would be inclined to invest money?

Mr Roberts—Quite.

Mr Rahimtoola—You are also of opinion that protection must be for a number of years.

Mr Roberts—Yes, for at least 25 years.

Mr Rahimtoola—Your Board of Directors you say consists of 15, out of which excepting yourself practically all the others are Indians?

Mr Roberts—Yes, all except myself are Indians.

Mr Rahimtoola—Have you got Articles of Association or Memorandum?

Mr Roberts—I am afraid I have not got them with me here.

Mr Rahimtoola—What is the procedure adopted for electing the Board of Directors?

Mr Roberts—The Directors are elected by the company in a general meeting.

Mr Rahimtoola—Are all the Directors shareholders of the company?

Mr Roberts—Yes.

Mr Rahimtoola—Necessarily?

Mr Roberts—The qualification for a director is the possession of Rs 10,000 worth of shares.

Mr Rahimtoola—Government also are practically your shareholders?

Mr Roberts—They are actually preference shareholders.

Mr Rahimtoola—They have not given you a loan?

Mr Roberts—No.

Mr Rahimtoola—They are entitled to their fixed interest?

Mr Roberts—Non-cumulative preference share.

Mr Rahimtoola—Did Government lay down some conditions as regards training of Indian apprentices?

Mr Roberts—The Articles provide for training of Indian apprentices.

Mr Rahimtoola—The Fiscal Commission laid down that whenever a bounty or subsidy was given it was incumbent on Government to lay down certain conditions for training of Indians. Have they said anything to the effect that the factory should make provision for the education of Indians or provide facilities for the training of Indian apprentices?

Mr Roberts—No. But in our Articles of Association we have given the Directors power to do this, there is nothing beyond that.

Mr Rahimtoola—As regards your factory you want to give preference to the strutting of refineries rather than sugar manufacture?

Mr Roberts—No. The refinery is there because it costs so little to put in and it is just there in case an opportunity for refining arises.

Mr Rahimtoola—You want to work both?

Mr Roberts—The reason why we bought a little gin was to give the factory a swing, before we started crushing so that when we started crushing we would have the factory balanced.

Mr Rahimtoola—I suppose the figures of Choudhry Mohamed Abdulla are the figures on which this present scheme of yours is based?

Mr Roberts—Not necessarily. The present scheme is based on certain fundamentals. We took the plant from the note of Mr Noel Deerp. As regards cane we selected an area where there is twice as much cane as the mill can crush within a five mile radius and 6 times as much within a 10 mile radius. These were the two fundamentals, namely that there should be abundant supply of cane and that the factory should be efficient.

Mr Rahimtoola—What is your opinion regarding the paragraph which the Revenue Secretary of the Punjab Government has written. He says "I am to say that the Punjab Government is in favour of affording protection to all classes and descriptions of sugar, including molasses and gur, though in the case of the latter it would be unnecessary to increase it to the same extent as in the case of refined sugar."

Mr Roberts—I differ from the Minister there because if I can get cheap material suitable for refining I don't know why I should not get it to reduce my overhead charges. So long as Java gur or whatever is the equivalent of gur is cheap I would let it be sold cheap because it is not fit for consumption.

Mr Rahimtoola—The sugar you get here from Java comes from Karachi and it costs you Rs 13-5 per cwt?

Mr Roberts—I sold some recently Rs 11-12 a cwt for Karachi.

Mr Rahimtoola—What do you think the minimum cost of production will be here of one ton?

Mr Roberts—I am afraid I cannot give you an approximate figure even. If I had known that you would require this information I would have brought them.

Mr Rahimtoola—Will you give it to us later?

Mr Roberts—I can show you a copy of the *gur pro forma* cost of production at Sonapat.

THE BELAPUR COMPANY, LIMITED

**Oral Evidence of Sir JOSEPH KAY, Messrs G R MAHAJAN and
R G PADHYE, recorded at Harigaon on Sunday, the
7th September, 1930**

President—Sir Joseph Kay, you represent Messrs Brady and Company Limited

Sir Joseph Kay—Yes

President—Are you the senior partner in the firm?

Sir Joseph Kay—I am the Managing Director

President—You took over the management of Belapur sugar factory, in what year?

Sir Joseph Kay—1924 We took over the management originally under a Power of Attorney from Marshall and Sons who were the first Managing Agents of the Company

President—Under what circumstances exactly?

Sir Joseph Kay—The Company became involved owing to capital expenditure on roads and buildings and estate development. The result was that they very soon got into financial trouble and they had not enough capital left to complete the erection of the factory and the development of the estate. That is from the cane growing point of view.

President—And so the Managing Agency was handed over to you firm?

Sir Joseph Kay—Not the Managing Agency. We were appointed for a temporary period as managers until we ourselves could make up our mind whether we should or should not proceed with the work.

Dr Matthai—How long did that temporary arrangement last?

Sir Joseph Kay—About a year and a half.

Dr Matthai—So that you took over the managing agency in 1925?

Sir Joseph Kay—Yes. There is an agreement by which we were appointed Managers. The future of the company was so uncertain that we would not enter into the usual managing agency agreement.

President—What is the usual position?

Sir Joseph Kay—Marshalls resigned after a year and we were then appointed as Managers of the Company.

President—There was no Managing Agency?

Sir Joseph Kay—No, not in the sense in which the term Managing Agency is generally understood, but we have most of the powers usually vested in a Managing Agency.

President—You have powers and privileges?

Sir Joseph Kay—Yes, subject to the control of the Board of Directors.

Dr Matthai—In what sense is the arrangement different from that of regular Managing Agency?

Sir Joseph Kay—In many ways.

Dr Matthai—Could you give some indication of the sort of difference?

Sir Joseph Kay—We have no right to assign the agency or to appoint special Directors to represent the Firm nor have we the right to borrow on behalf of the Company without the sanction of the Board. Very often in the case of a Managing Agency the Managing Agents have these rights. I am sorry I haven't got a copy of the agreement here.

Dr Matthai—When did you start operations?

Sri Joseph Kay —You mean the crushing of sugarcane

Dr. Matthai —No, the manufacture of sugar

Sri Joseph Kay —The Company did not commence actual operations until 1925. We had about 600 acres of cane growing, in 1924 but the factory was not completed with the result that the first cane crop had to be carried over for a year.

Dr. Matthai —Actually the erection was completed and the operation started sometime after you became Manager?

Sri Joseph Kay —Yes, but before the factory was erected they were crushing some of the cane and making it into gur. That was never the intention of the Company.

President —You have sent us your costs in reply to the questionnaire. You have also asked us to keep the costs confidential. I may say at once that it is not usual in our enquiries that the costs should be kept confidential for we have to justify our proposals to the Government, and the Government has to justify the proposals to the Assembly. If we had no costs or were prevented from communicating them to the Government of India, it would be very difficult to justify the case. Is there any particular reason for keeping your costs confidential? In what way would the publication adversely affect you?

Sri Joseph Kay —It would be simply placing in the hands of competitors the whole facts relating to our business.

President —Who are your competitors?

Sri Joseph Kay —We suffer from competition from Cawnpore sugar.

President —But if the Cawnpore companies agree to their costs being published?

Sri Joseph Kay —If the costs of others are published, I don't object to ours being published.

President —We should try to persuade other companies to agree to publication. If we are successful, you would have no objection to publication.

Sri Joseph Kay —I see the point. I have no objection to your publishing our costs.

President —You have about 7,000 acres?

Sri Joseph Kay —Altogether, yes.

President —In that area I suppose there are considerable varieties of soil?

Sri Joseph Kay —Yes.

President —Would it be possible to give us some soil classification? What is the best class of soil that you have here?

Mr. Mahajan —The best would be about 600 acres.

President —You have some settlement classification in Bombay of different sorts of soil?

Mr. Mahajan —Yes. The best for sugarcane is called the "medium black" with sufficient depth over 1 foot.

President —What does your Settlement Department call that?

Mr. Mahajan —"Madhyam Kali", they call it. That is not the proper word really but is a literal translation and is taken from the bulletin published by the Irrigation Department.

President —You have got 600 acres which will be so classed?

Mr. Mahajan —Yes and the rest under sugarcane block is of lighter nature.

President —What acreage is that?

Mr. Mahajan —About 2,400 acres. Then we have got heavy black soil about 1,500 acres.

President —That is the soil on which you are trying E. K. cane?

Mr Mahajan —No We are tiving Coimbatores canes We have besides 395 acres set apart for industrial purposes and about 400 acres are occupied by roads and canal

President —That makes how much?

Mr Mahajan —5,235 acres

President —What about the balance?

Mr Mahajan —The balance of about 2,000 acres is left fallow, being unfit for growing sugarcane or any other crop

President —Why?

Mr Mahajan —On account of the bad nature of the soil

President —You have got 2,000 acres of waste lands?

Mr Mahajan —Yes

President —Would it be possible to utilise that?

Mr Mahajan —We might take about 500 acres

President —Good soil?

Mr Mahajan —Yes, but we will have to spend a good deal of money for levelling, draining, etc

President —Which is the worst soil from the point of view of sugarcane?

Mr Mahajan —The very shallow soils

President —Which is that?

Mr Mahajan —Mummad soil, i.e., only a couple of inches of soil over the mium

President —There is very little of it?

Mr Mahajan —Yes Next to that is the heavy sticky soil

President —That gives a small outturn?

Mr Mahajan —Certain varieties like Pundia used to give small outturn Since we have changed the varieties, we are getting better yield

Sir Joseph Kay —We are now getting suitable canes for particular soils With the new varieties we are getting about 25 tons on an average

President —You were getting about half?

Mr Mahajan —That was with the local pundia

President —Is that because they have got better roots in the Coimbatores canes?

Mr Mahajan —Yes They penetrate the clay because they have got a heavier root system

Dr Matthai —You get 25 tons of that per acre?

Mr Mahajan —Yes on an average

Dr Matthai —How does it compare in respect of sugar content?

Mr Mahajan —That is not done separately

Dr Matthai —I am trying to find out approximately

Sir Joseph Kay —That is given in our reply to the questionnaire

Dr Matthai —This is Co 213

Mr Mahajan —Yes, Co 213 and 210.

Dr Matthai —That is about 12½ per cent?

Sir Joseph Kay —12.4 per cent

Dr Matthai —If you have Co 213 on a soil like that and on the best class of soil, would there be any difference as regards sugar content? Would the soil make any difference to that?

Mr Mahajan —From what I know it should not make any difference It may take a longer or shorter time to ripen

Dr Matthai —Apart from the yield per acre and the expenses of cultivation the longer crop might mean more in the way of expenses of cultivation?

Mr Mahajan —Not necessarily

Dr Matthai —Slightly?

Mr Mahajan —Very little

Dr Matthai —If you leave out the duration of the crop, is there not likely to be any difference between the two

Mr Mahajan —I don't think so

Dr Matthai —In the light of the answers you gave to the President I take it there are about 3,000 acres which are really fit for sugarcane cultivation

Mr Mahajan —Yes

Dr Matthai —If you are working the factory to capacity, how many acres would you need at a time under sugarcane cultivation?

Mr Mahajan —About 2,000 acres of cane per year would give us enough to run the factory to full capacity

Sir Joseph Kay —I want to qualify that. It depends on the number of days you are going to work the factory and what you are aiming at. When you have got an estate of this size, you have got to arrange your cane in such a way that it does not all ripen at one time. You want to crush the cane at its maturity. Now if you had one variety of cane all ripening simultaneously, first of all it would be extraordinarily difficult to get it crushed within a short period. If you planted the whole area with one variety, you would not get out of the cane the sugar you ought to. What we have aimed at is this — to extend crushing season which is so important in a concern of this description because there are certain establishment charges whether we crush for 30 days or whether we crush for 130 days so that we have got to try and arrange our cane so that we have matured canes coming into the mill at all times during the crushing season.

Dr Matthai —A period of 130 days in the year, taking holidays into account, would be about correct?

Mr Mahajan —Yes

Dr Matthai —You can't go beyond that?

Mr Mahajan —We can go

Sir Joseph Kay —We might do 15 days more

Dr Matthai —Suppose you take 150 days as your working season and if you take an extraction of about 10½ per cent

Mr Padhye —It might go a little more

Dr Matthai —At 35 tons of sugar a day, how many acres do you want?

Sir Joseph Kay —We look at it the other way about. With a smaller number of acres and with an improved type of cane, we may show a bigger yield.

Dr Matthai —As you yourselves suggest, if you are not able to work to full capacity and if you are not able to have the longest possible working season, your overhead charges will correspondingly increase per unit of production. Therefore in order to bring your overheads down to the minimum, you have got to work your factory to capacity, that is to say 35 tons of sugar a day and as many days in the year as possible. Suppose you did that, would you be able to get enough sugarcane from your estate?

Sir Joseph Kay —Yes, especially with these improved types of canes which would give more sugar.

Dr Matthai —The very best type that you have is about 14 per cent?

Mr Mahajan —Yes. Last year we had about 500 acres under the new type.

Dr Matthai —If you take about 5,000 tons of sugar per year as your annual output, you won't have any difficulty in getting the necessary amount of sugarcane.

Sir Joseph Kay —Not with the improved types, because we anticipate a better sugar yield from the canes. Our view is that we won't be able to keep the factory working to capacity unless we evolve improved types of cane.

President —When you have got all your improvements in cultivation and in the type of cane, you would get nearer 80 tons to an acre?

Sir Joseph Kay —I am not sure whether we shall get any more yield per acre than at present unless we extend B K 28, and put down P O J 2878. It is too early to say what yield we would get from this latter cane.

President —What would you put down as the average excluding the possibility of P O J 2878?

Sir Joseph Kay —It would be safe to take last year's figures, 27 tons. This new Java cane which you saw seems to us to give a bigger yield.

Dr. Matthai —How long have you been experimenting with P O J?

Mr. Mahajan —For about 18 months.

Dr. Matthai —Is it promising?

Mr. Mahajan —Yes. From the growth of the plant it appears so. We have not analysed yet. After a month's time we shall have only a laboratory test.

Sir Joseph Kay —In a concern like this it is very difficult to do a test of that kind. In the crushing season unless you have a sufficient quantity, you can't get one particular type going through the mill to get the details you want.

Dr. Matthai —Have you got any kind of results with P O J as compared with B K?

Mr. Mahajan —None at all.

President —You have not made any tests either as to acreage or output?

Mr. Mahajan —No.

Sir Joseph Kay —We have figures for Co 213.

Dr. Matthai —I do not know whether the Java figures would be of use to you.

Sir Joseph Kay —No.

President —You got P O J canes from Coimbatore?

Mr. Mahajan —Yes.

Dr. Matthai —I take it that in Java nearly the whole area is under P O J.

Mr. Mahajan —93 per cent.

Dr. Matthai —Is there any kind of special trouble with regard to B K? Is it supposed to be liable to disease?

Mr. Mahajan —In Java it had suffered from some root disease and in certain types of soil it failed. Moreover they found P O J better than B K, and so they replaced B K. We have not noticed any disease in B K.

President —Has it done well in the clayey soil?

Mr. Mahajan —Better than Pundia but less than Co 213.

Dr. Matthai —Tell me what is the advantage of B K as compared with Pundia? The Pundia figures you have given are not too bad in comparison, that is to say if you take both yield and sucrose content into account you get probably the same result. If you take Pundia and B K, Pundia gives you a larger yield per acre but a lower sucrose content but if you take both the factors into account you may get results more or less the same. I want to know precisely why it is that you thought it necessary to replace Pundia by B K.

Mr. Mahajan —Apart from these figures, there are other reasons. First of all, Pundia is susceptible to redrot.

Dr. Matthai—From your experience you have not found it?

Mr. Mahajan—We have found it

Dr. Matthai—Here E K has not been susceptible to redrot?

Mr. Mahajan—Pundia is susceptible to redrot and fields after fields get affected. So, we had to replace it by some other variety. That is one reason. Then, E K stands better in respect of water irregularities which are very common in the canal area whereas Pundia, if there is no water for over ten days, suffers badly.

Dr. Matthai—What about the grinding part of it? Does it make any difference?

Mr. Mahajan—E K is a little harder to crush because it contains more fibre than Pundia.

President—On the other hand your fuel costs would be less?

Sir Joseph Kay—Yes.

Mr. Padhye—In the matter of yield of sugar per acre, E K is better than Pundia. In the case of Pundia it is 3.02 tons of sugar per acre, in the case of E K 28 it is 3.25 and in the case of Co. 213, 2.78.

Dr. Matthai—But actually in the Mill E K 28 is more difficult to crush than Pundia?

Mr. Padhye—A little more difficult because it is slightly harder and more fibrous. So there is a difference in extraction.

Dr. Matthai—It is too small compared with the advantage you get?

Mr. Padhye—Yes. It makes a great difference with Co. 213 because there the difference in sucrose extraction is about 5 per cent.

Dr. Matthai—Is there any difference in the boiling house?

Mr. Padhye—Yes. E K is better for recovery because it contains more crystallizable sugar. So in the boiling house efficiency E K is better than Pundia.

Dr. Matthai—Practically on every consideration E K is better?

Mr. Padhye—Yes.

President—You get a better output of gum from Pundia?

Sir Joseph Kay—Yes.

Mr. Mahajan—Because they do not want to take out any impurities.

Mr. Padhye—They only want a cane which can be easily crushed.

President—I want to ask you a few questions as to the general position. We want to satisfy ourselves that the three conditions of the Fiscal Commission are fulfilled. The first condition relates to the natural advantages of sugar manufacture. Cane has been grown in India for centuries and so far as the first condition is concerned, we can assume for the time being that it is fulfilled. The second condition is that without protection the industry will not develop or will not develop as quickly as is necessary in the interests of the country. Of that, I think, there will be no question—at any rate so far as your factory is concerned. The third condition is that the industry should be able to stand without protection ultimately. This means the industry must be prepared eventually to face the possibilities of a reduction in or even the abolition of the revenue duty. That is really a question which seems to me to be the most difficult and in regard to which it would be worth while looking into your figures rather more closely. Taking your costs as given here, so far as I can see, with certain improvements in your factory there will be very little difference between your factory costs of sugar excluding that of materials and the Java factory costs, is not that so? At any rate that is what I have understood from your replies to the questionnaire. You state in reply to question 51 what improvements you are going to effect as and when the finances permit. With the addition of that machinery to the factory I understand you to claim that you will get practically the same results as Java.

Sir Joseph Kay —Do you mean our cost of milling and manufacturing?

President —Yes

Mr Padhye —From the point of view of efficiency,—I mean the milling efficiency and boiling house efficiency we will get as good results as Java.

President —At present Java gets 12 per cent, and you have worked up to 11 per cent

Mr Padhye —The cane contains more sucrose. But making allowance for the cane, our working will be quite as efficient as Java so far as the factory is concerned

Dr Matthai —The extraction figure that you give is 91. How does that compare with Java?

Mr Padhye —That is lower than what is obtained in Java.

Dr Matthai —Have you any information as to what their average is?

Mr Padhye —Between 94 and 95

Dr Matthai —I suppose, as far as you are concerned you put down your low extraction relatively to the absence of a fourth mill

Mr Padhye —Yes

Dr Matthai —Largely to that?

Mr Padhye —Yes

Dr Matthai —Is that the most important consideration?

Mr Padhye —Yes

Dr Matthai —If you take your boiling house efficiency, how does that compare with Java?

Mr Padhye —As you have seen, it is slightly lower

Dr Matthai —What do you mean by 'slightly lower'? Have you any figures for Java?

Mr Padhye —It is in the book which you give

Dr Matthai —Have you been able to interpret these figures?

Mr Padhye —Yes

Dr Matthai —What is their boiling house efficiency?

Mr Padhye —89.0 as compared with our figure of 80.8

Dr Matthai —What really accounts for the difference there?

Mr Padhye —As you know we have other variables such as Pundia, and Co 213. In regard to these kinds, the boiling house efficiency is lower

Dr Matthai —What is the characteristic of the cane which affects the boiling house efficiency?

Mr Padhye —It is the character of the juice that affects it

Dr Matthai —You mean the purity of the juice?

Mr Padhye —Yes

Dr Matthai —If you got more solids as compared with sucrose then your boiling house efficiency would be lower

Mr Padhye —If we have more sucrose per 100 solids then it will be more.

Dr Matthai —I was putting it the other way. Supposing you had solids other than sucrose more in proportion to the sucrose, then it would be lower?

Mr Padhye —Yes

Dr Matthai —May I take it that the principal difference between the two is largely due to the purity of the juice?

Mr Padhye —It is not exactly due to the purity of the juice. There is another factor in that. It is not the purity of the juice but it is the invert sugar that accounts for the difference. Java contains less and ours is more, that is to say, our juice has a tendency to form more molasses and less sugar

President—Is that the characteristic of the cane or is it a question of harvesting the cane at the proper time?

Mr Padhye—That is to a certain extent true. If we harvest the cane exactly at the time of maturity, then our boiling house efficiency is more.

President—There is a possibility of increasing your boiling house efficiency by paying more attention to the exact time of cutting?

Mr Padhye—It would be possible, but there are practical difficulties. Our boiling house efficiency is likely to improve when the area under B K goes up. In the case of E K the invert sugar is much less. Sometimes it is only 0.5 per cent and we have always thought that with B K our boiling house efficiency went up to 88 and more.

Dr Matthai—If you want lower cost per maund of sugarcane and if you want to increase your boiling house efficiency, in both cases the primary question is to improve the variety of the cane.

Mr Padhye—Yes.

President—As regards this question of fuel consumption, that too depends largely on the variety of the cane?

Mr Padhye—Yes, on the fibre content of the cane.

President—The conversion of the triple into quadruple would effect a considerable saving in that respect?

Mr Padhye—I have worked out the figures. It would mean a difference of 10 per cent in steam, that is to say, of the total quantity of steam required 10 per cent would be saved.

Dr Matthai—I suppose the effect of that on the ultimate cost of sugar would be negligible. Suppose you reduce that by 10 per cent, it will be a negligible amount.

Mr Padhye—We cannot take on that basis.

Dr Matthai—Supposing you reduce your fuel expenditure by 10 per cent as a result of having a quadruple evaporator, what is likely to be the approximate effect on the final cost taking your 1929-30 figures?

Mr Padhye—Rs 8,000 will be the saving on 1,25,000 maunds of cane.

Dr Matthai—It will bring the cost down by about 9 pice.

Mr Padhye—Yes.

Dr Matthai—You will reduce the final cost by that figure.

President—Vacuum pump and condenser—this is merely the extra machinery necessary for installing the quadruple?

Mr Padhye—Yes.

President—Then you say one more vacuum pan and a few crystallisers.

Mr Padhye—That is for boiling the massecuite.

President—What do you call it?

Mr Padhye—We call it vacuum pan.

President—What is the object of that?

Mr Padhye—The whole object of the vacuum evaporator and vacuum pan is this. Our mill is too big. Our mill is not in balance with the boiling house. The result is that when we run our mill for 16 hours we have to shut it down for want of room.

President—It is not properly balanced?

Mr Padhye—That is so. The quadruple, the vacuum pan and crystallisers would partially balance the boiling house with the milling house.

President—What result will that have on the cost?

Mr Padhye—It is very, very difficult to say that. The advantage will be felt in two ways. First of all, it would result in a saving of fuel. That will be one advantage. Then, there will be an increase in the capacity, that is to say, the daily output will be more with practically the same number of men.

President — Your output is 35 tons a day?

Mr. Padhye — Yes

President — What will it go up to?

Mr. Padhye — The mill can handle 400 tons a day, while at present it is handling 325 tons

President — That is to say, you can work up to 600 tons of cane a day, if you can balance it properly?

Mr. Padhye — Yes, that will make a considerable difference

President — You will never in this area be able to produce sufficient cane to keep the mill employed?

Sir Joseph Kay — I don't think so

Dr. Matthai — If you are able to work up to 600 tons a day and if you are not able to raise that much from your own estate, is there any possibility of your being able to raise the supplies from private cultivators?

Sir Joseph Kay — That would depend on the price of *gur*. If he was going to get more for his *gur* he would not care to sell his cane to the mills

Dr. Matthai — Assuming the price of *gur* was not prohibitive from the point of view of cane there is nothing to prevent your raising your supply of cane here from the cultivators?

Mr. Mahajan — No. On one occasion we did buy when the price of *gur* dropped considerably

Dr. Matthai — If the sugar prices were such that you could stop growing your cane then you could possibly get your supplies of cane from the cultivators?

Mr. Mahajan — If you take the present situation there is nothing much in it. They have stopped growing cane altogether

Sir Joseph Kay — Last time we bought 1,500 tons

Mr. Mahajan — Within 10 miles we will get about 20,000 tons

Dr. Matthai — If it is only 10 miles then you can move it by bullock carts

Mr. Mahajan — That would be expensive

Dr. Matthai — If it is mechanical transport you can command a bigger distance than 10 miles

Mr. Mahajan — Ten miles is the limit

Dr. Matthai — Leave alone the question of expense for the moment. If you bring the cane by motor lorries you could bring it without risk of deterioration from as long a distance as 20 miles

Mr. Mahajan — That way we can

Dr. Matthai — As the President suggested the real issue when we come to establishing a case for protection is that you have got to indicate, taking as long a time as you reasonably want, that it is possible to bring down your costs to a point where it would be within a measurable distance of the costs of your competitors. It would be necessary for us to get some kind of indication in terms of figures

Sir Joseph Kay — When you go further afield you would get the actual conditions in Bihar where the cultivators do supply the factories. What we have here is absolutely self-contained

President — Would it be possible for you to extend your acreage at all?

Sir Joseph Kay — We could probably get another 500 acres

Dr. Matthai — Would it be possible to get further acreage?

Sir Joseph Kay — I think so. I have not gone into that yet

Dr. Matthai — If adequate protection was granted, would it be possible to obtain sufficient land here?

Sir Joseph Kay — I think we can get a little more

Dr. Matthai — Would you be able to produce sufficient cane to crush 600 tons a day?

Mr. Mahajan — I am doubtful because the navigation rules won't allow us to grow cane on more than one third of the area.

Dr. Matthai — You must get private supply. Roughly you would want cane produced in 3,000 acres of land a year, that would mean that your total area would have to be something like 9,000 to 10,000 acres.

Mr. Mahajan — Nearly double of what we have got now.

Dr. Matthai — Would you be able to obtain cane by private treaty with the tenants?

Mr. Mahajan — Yes, if the *gur* prices are low.

Dr. Matthai — If you want to get a fairly substantial reduction in the costs within, say 10, 15 or 20 years you have got to bring down your sugar cane cost—which is the most important thing.

Mr. Mahajan — That is so.

Dr. Matthai — And the only way in which that can be done is by improving your variety of cane and increasing the yield per acre. Then the other most important expenses are supervision and establishment charges. It is Rs. 1-15-0. The only way in which you can bring down the cost is by increasing your output.

Sir Joseph Kay — That is what we have been doing all along.

Dr. Matthai — Therefore if we are to be satisfied that within a fairly reasonable period—say 20 years or 25 years you can bring your cost down the two ways in which that can be done are first, by improving the variety of cane and second, increasing your output.

Sir Joseph Kay — We have seen what can be done during a limited number of years and I have no serious doubt that we can go still further. Developments we expect will take place in the matter of improved output of cane.

President — Excluding your cost of cane your costs come to Rs. 3-13-5 a maund?

Sir Joseph Kay — Yes.

President — With your improved machinery, supposing all those improvements which you have specified in reply to the questionnaire are brought into effect, to what extent would you expect to reduce your costs?

Mr. Padhye — It will depend on what will be the output.

President — Assuming for argument's sake that you are working up to 600 tons a day and all the cane required for that is being bought at the present cost?

Mr. Padhye — There will be a reduction of about 6 annas in depreciation and overhead without any additions to the present factory.

Sir Joseph Kay — I don't think that in the factory without these additions we can go up to 600 tons per day unless we keep the mill running for 24 hours.

Dr. Matthai — What is the figure that you consider reasonable?

Sir Joseph Kay — 400 tons.

Dr. Matthai — What is this figure of 600 you gave us then?

Mr. Padhye — The mill can crush that much. If you keep the mill running for 24 hours we can crush 600 tons.

President — Taking these extensions how much can you handle?

Mr. Padhye — 400 tons.

President — If you are handling 400 tons would you be able to reduce your costs other than the cost of sugarcane? It stands at Rs. 3-13-5. I don't see in this Form II where it is shown. How much is the depreciation?

Mr. Padhye — Rs. 0-11-8 is the total charge for depreciation.

President—Is it not a fact that in your manufacturing department somewhat different from other factories? I might find out more by taking down all your machinery and overhead of the works.

Sir Joseph Kay—Actually last year we spent Rs 52,000 on repairs and built up a large balance.

Dr Matthai—May I take it that it is a current bill, ordinarily called current repair and maintenance?

Sir Joseph Kay—Yes.

Dr Matthai—Over and above that there is a debit to depreciation which is really a debit to depreciation.

Sir Joseph Kay—That is it.

President—It would cover obsolescence.

Sir Joseph Kay—Yes. Item 6 is all overhead charges in Bombay and interest and other charges.

President—How is that divided up? Can you divide it up?

Dr Matthai—It would be a good thing if you could divide it up of both Items 6 and 7 in writing.

Sir Joseph Kay—I will with pleasure.

President—Now speaking of the 1914 head office expenses, a considerable reduction would there be? As you were saying there would be a considerable reduction in overhead charges.

Mr Padhye—It will come to about 25 per cent reduction.

President—So that we might take that at somewhere at 25 per cent roughly?

Mr Padhye—Rs 210.

President—What is the present position of the works?

Mr Padhye—About Rs 8000.

President—Out of which the date is paid for the works?

Mr Padhye—Yes.

President—So the Java people have about Rs 1000 for the Java and manufacturing costs, overhead charges and so on.

Mr Padhye—Yes.

President—How much is the freight?

Dr Matthai—The freight rate for the current season July 1st to July 1st for Bombay and Karachi is 6 Rupees per ton for the first 1000 tons and 5 Rupees for the rest. That is to say about 5 Rupees a ton.

President—That leaves the Dutchman Rs 1100 for the Java. You say that your efficiency will be practically equal to the Java. So your costs will be, excluding material Rs 2140.

Mr Padhye—Yes.

President—So that if we take any Rs 100 for Java material costs, it will be left with Rs 136 for his cane. To produce one hundred of cane, how many mounds of cane?

Mr Padhye—About 85 mounds. That is the first 100.

President—It comes roughly to about 24 mounds a mound for his cane. The suggestion is that Java factories have paid about 10 per cent from the reserves and not from the profits that they have made. They are really running at a loss.

Sir Joseph Kay—That is my information.

Dr Matthai—I am inclined to suggest that they are not. They cover their overheads and get no profit.

President—They are very averse to binding themselves to any restrictions. Originally I believe they said they were agreeable to restrictions when the price of sugar fell below 2 cents a lb.

Sir Joseph Kay—They had a market in India for one thing.

President—They have not joined in any plan of restrictions so far.

Sir Joseph Kay—No.

President—It doesn't look as though they are losing much. Even supposing they are producing at a loss, between their Rs 2½ a maund of cane and your Rs 8 there is a pretty big margin. Supposing including a fair profit, Rs 3½ was the cost of sugarcane, still there would be a long way to get down your cost.

Sir Joseph Kay—We recognise that. (Hundred in costs.)

President—Looking at your costs of cultivation, the main directions of expenditure are irrigation, cost of seed and manures.

Mr Mahajan—Yes.

President—These have been reduced during recent years. The cost of seed depends on your general costs.

Mr Mahajan—Yes.

President—If you produce cane at a lower cost, your cost of the seed is lower.

Mr Mahajan—Yes.

Dr Matthai—What I am suggesting is the reduction of your costs under setts is not merely due to the reduction in the cost of seed, but also due to the reduction in the cost or price of gur or sugar.

Mr Mahajan—Not necessarily. The price of seed falls with the price of cane and not with the price of sugar.

Dr Matthai—The main competition is gur. I am taking the market price of seed. The market price of seed depends on the price of cane.

Mr Mahajan—That is so.

Dr Matthai—The price of cane depends on the price of gur.

Mr Mahajan—Yes.

President—You debit in your books the cost of seed according to what it costs you to grow and as my colleague was saying, your cost of seed might be reduced by using less number of setts per acre.

Mr Mahajan—We have already cut that down to the minimum.

Dr Matthai—We have seen the costs of some other farms in the Deccan. Your figures show an improvement in almost every respect except seed.

Mr Mahajan—It may be that they may be buying seeds.

President—How many setts do you use per acre?

Mr Mahajan—10,000.

Dr Matthai—The figure that I have seen including the cost of seed and labour for planting is Rs 60 as compared with your figure of Rs 79 4.

Mr Mahajan—This is not the standard figure.

Dr Matthai—That is to say you have got your seed from a bad year?

Mr Mahajan—Yes. Previous year it was Rs 65.

Sir Joseph Kay—This was due to the frost. Last year it was Rs 61, the year before Rs 63 and the year before that Rs 88. Last year the cost of our cane came down tremendously.

Mr Mahajan—Next year it will be lower still.

Dr Matthai—How many setts will that represent?

Mr Mahajan—10,000.

President—I see in the effluent farm at Hadapsar they use 7,500 setts.

Mr Mahajan—That is only experimental.

President—May we regard their costs as experimental costs?

Mr Mahajan—It is rather risky to tell a man to put in less seed. If there is little failure in germination, he suffers more. A little more in the cost of seed always pays.

President—I see here a reply given by the Director of Agriculture that the number of sets used for cultivation on the main Deccan canals in 1929-30 was 12,000 so that your number of sets doesn't seem at all to be excessive, 2,000 below the average.

Mr Mahajan—I would like to say one more word about this. From the planting we have done of P O J, we have found that the germination of P O J was nearly 95 per cent and we are putting only 5,000 sets per acre as we want to use it for seed. With these new varieties we may be able to go down in the matter of costs of seed.

President—There is a possibility of reduction in the cost of sets?

Mr Mahajan—Yes, with this new variety.

Dr Matthal—You might put it at somewhere about Rs 50?

Mr Mahajan—Yes, altogether both seed and planting.

President—What about the irrigation rates?

Mr Mahajan—They charge about Rs 15 per acre.

President—How does that compare with the rates in other parts of India?

Sir Joseph Kay—It is extremely high.

Mr Mahajan—In the United Provinces I think it is Rs 5, but then the number of irrigations is 4 or so. Government say that they have spent more money on the Deccan canals.

President—Supposing in course of time you are able to use less water for your improved variety, Government make no reduction, so that there is no prospect of economies in the direction of water supply.

Sir Joseph Kay—Government have been going into this and they have been trying to introduce what is known as the block system.

President—What is the block system?

Mr Mahajan—The block system, is that the Irrigation Department allow us to plant only on one third of the area. 3 times the area is considered to be a block. Supposing one acre is allowed, then three acres are taken as a block and the charges of irrigation are put down on all the three acres at Rs. 22 per acre whether you grow cane or not. It is not for the crop itself but for the particular area, out of which 1/3rd is allowed for cane. The present rate is Rs 22 and so it is (3 x Rs 22) Rs 66 per block. So the cultivator has to pay Rs 66 against Rs 45, as in the other two acres which are fallow he cannot raise any successful crop, so all the charges for irrigation go to the sugarcane.

President—What is the object of that?

Sir Joseph Kay—The object is to get the alternative crops.

Mr Mahajan—They should not continuously grow sugarcane and spoil the texture of the soil. That is the idea at the bottom.

Dr Matthal—Does the cultivation of sugarcane spoil the texture of the land?

Mr Mahajan—Not sugarcane, but continuous irrigation spoils the texture of the land.

President—How does it spoil the texture of the soil?

Mr Mahajan—The land becomes packed.

President—Take the rice crop.

Mr Mahajan—That is always grown in sandy soil. These Deccan soils which contain certain fine silt get packed with continuous irrigation.

President—This block system has the result of driving cane off the land?

Mr Mahajan—All the changes which they have put down go to sugarcane, so the irrigation charges for sugarcane are increased by 50 per cent. With the rates of *gur* ruling at present, it doesn't pay to grow sugarcane.

President—Have they introduced the block system so far as you are concerned?

Sir Joseph Kay—We have had a lot of correspondence about it.

Dr Matthai—Sugarcane may bear in some cases 3 times as much irrigation charges as other crops?

Mr Mahajan—Yes, much more than that. 9 times roughly, because sugarcane is charged 8 times the seasonal rate.

Dr Matthai—So that the irrigation policy would almost appear to be designed for the suppression of sugarcane?

Mr Mahajan—It is not for that. It is simply to get more money.

President—The result of the Government's policy is that sugarcane is gradually going out of cultivation?

Sir Joseph Kay—I don't think we ought to criticise the Government policy.

President—Let me put it this way. In the last few years sugarcane has been going out of cultivation?

Mr Mahajan—The area has gone down on our canals.

President—We understand that a new system of assessment of irrigation charges has been brought into force. How long ago was it?

Mr Mahajan—Only a few years back.

President—How many years?

Mr Mahajan—5 years back.

President—How long has the reduction in the area of sugarcane been noticeable?

Mr Mahajan—The minimum is in the current year. It is roughly half.

President—Are there any special reasons for the reduction?

Mr Mahajan—Slump in the *gur* market. That is one of the main reasons.

President—Have you made any effort to obtain any reduction in rates on the quantity of water taken?

Mr Mahajan—We have got an agreement with the Government. They have been writing to us about this block system and we maintain that they have no right to upset the present arrangement.

President—Looking at it purely from the business point of view, Government have given an advance of Rs 6 lakhs to this Company. The price of imported sugar is going down. If this Company goes out of business altogether, Government will not only lose their Rs 6 lakhs, but they will lose the revenue and irrigation assessment.

Mr Mahajan—It will be nearly 1½ lakhs a year for assessment and irrigation.

President—That being so the fact that you take a very large amount of water would, it seems to me, justify a reduction.

Sir Joseph Kay—We asked Government and they said 'No!'

President—Irrigation cess comes to Rs 55,000.

Mr Mahajan—It is far more than that now.

President—After all it is a question of the balance of advantage. If Government were really satisfied that under present conditions the Company could not carry on without some assistance, it seems to me that it would be good business to knock off a portion of the rates.

Sir Joseph Kay—We have petitioned Government, but with no success. These are all protective works and they expect a fair return on the capital invested.

President—The works are protective irrigation works, so that there appears nothing to prevent them from reducing the rates. Of course in business it is common. Take an electricity concern for instance, supplying a big steel factory. They will give a special reduction. It would not appear unusual at any rate from the business point of view to see Government following the same system as far as irrigation is concerned.

Sir Joseph Kay—No, it is a point which has not been left untouched. When they lent us Rs 6 lakhs they went into each and every point.

President—As regards the question of manure, you are carrying out very considerable improvements. We saw some yesterday.

Sir Joseph Kay—Yes.

Dr. Matthai—I heard you mention yesterday, Mr. Mahajan, Rs 120 as being the figure that you would work down to?

Mr. Mahajan—Yes, with the present price of cake.

President—That was by substituting top dressing?

Mr. Mahajan—Green manure, more sulphate and less oil cake.

President—As a general practice the position is that you are not able to secure farm yard manure and therefore you substitute top dressing to a great extent?

Mr. Mahajan—Green manure is substituted for farmyard manure.

Dr. Matthai—Most of your bulky manure is I think green manure. About 10 per cent of the area is under green manure?

Mr. Mahajan—Yes.

Dr. Matthai—And the rest is what?

Mr. Mahajan—Whatever farm yard manure we can get we give to a small area, and for the remaining nearly 50 per cent we don't give anything at all.

President—Your green manure comes to a very small amount—about Rs 4,000.

Mr. Mahajan—Because of the small area.

President—Can you extend the area?

Mr. Mahajan—Yes, within a short period if we have one or two more tractors which we can utilise for buying the same in time.

Dr. Matthai—But your unit is also lower—Rs 4 per acre.

Mr. Mahajan—This is because it is divided on 1,000 acres.

Dr. Matthai—Actually it is used for a very much smaller area.

Mr. Mahajan—Yes.

President—Would it be possible to reduce the farm yard manure still further?

Mr. Mahajan—We are trying. Whatever farm yard manure we get would be very useful for light soils.

President—I think you said yesterday that experiments were made with half oil cake and half sulphate of ammonia according to the nitrogen content.

Mr. Mahajan—Yes, half and half.

President—But I find Rs 72,000 for oil cake and Rs 22,000 for sulphate of ammonia. What proportion is that?

Mr. Mahajan—These are only previous year's figures, moreover the proportion can not be fixed from the money spent as some manures are cheaper than the others. The proportion of nitrogen for the current year is 50—50. Last year we tried the experiment in four places and we found this combination more economical and more profitable.

Mr. Mahajan—They are roughly cake 48 sulphate of ammonia 25.

President—Could you give us figures for this year for oil cake and sulphate of ammonia?

Dr. Matthai—Could you prepare a short note giving the proportions of these various kinds of manure used in 1928, 1929 and 1930 and also the proportions which you propose to use in the current year and showing the reduction in costs? It would be very useful if you could.

Sir Joseph Kay—A great deal depends on the price of oil cake.

Dr. Matthai—Assume for the purpose of this note that the prices are current prices.

Sir Joseph Kay—There would be a big difference because the price of cake has gone down. The price of sulphate of ammonia has also gone down.

President—It is a curious thing that sulphate of ammonia is more expensive in this country where it is produced than elsewhere.

Dr. Matthai—What I am trying to find out is this. Leave the factor of prices alone for the time being. Is there any possibility of economising in the quantity? That is an important point. I find that the Sugarcane Committee in 1920 made a fairly strong point of the fact that in the Deccan Canal area something might be done in that direction. Have your experiments led you to conclude that by varying the proportion of these manures you can effect a reduction? That is a point worth elucidating.

Mr. Mahajan—The quantity would be the same. We cannot reduce the amount of nitrogen per acre.

Dr. Matthai—My point is rather different. My point is whether by re-arranging the various kinds of manure it might be possible in certain instances to reduce the cost per acre. For that purpose if you could give us the latest figures that you have of the quantities and costs of manures, it might be useful.

Sir Joseph Kay—We will send you the figures.

President—Am I right in thinking that so far as the costs are concerned if everything works out very favourably, apart from the increase in output, it would be impossible to make a reduction of say more than one anna on account of improvements?

Mr. Mahajan—There is a slow improvement in the soil.

President—It seems to me that if you are lucky you might be able to reduce your cost of seed, cost of manure and so on by about Rs. 20 to Rs. 25 per acre.

Mr. Mahajan—About that.

President—So that really for any big reduction in the cost of producing cane you have to look for an increase in the quantity?

Sir Joseph Kay—Yes to the improved type. That is what we are trying to concentrate on.

President—Since the factory has been in existence you have improved your output very considerably.

Sir Joseph Kay—Yes.

Dr. Matthai—You have improved the yield per acre.

Sir Joseph Kay—Yes.

Dr. Matthai—At present you are getting about $2\frac{1}{2}$ tons of sugar per acre.

Mr. Mahajan—Yes.

Dr. Matthai—Is there any possibility within the next 10, 15 or 20 years of your working up to 4 tons?

Mr. Mahajan—I doubt.

Dr. Matthai—Is there any reasonable prospect?

Sir Joseph Kay—It is difficult to say. We cannot replace the old cane under five years at the very least—I think we ought to say 7 years.

President—You can give us some information about P. O. J. from some circles where you are growing? You have one crop growing.

Mr. Mahajan—We can give you figures when we analyse the cane.

Sir Joseph Kay—Would a laboratory test be useful to you?

Dr. Matthai—Yes

Sir Joseph Kay—We will send you that as soon as we get it through

President—What has been the result in output in Java by the substitution of P O J?

Mr. Padhye—35 per cent increase in tonnage. There has also been an increase in sugar content. From $4\frac{1}{2}$ tons they went to 6

President—If the result was anything comparable with that in Belapur you might almost get 1 tons

Mr. Padhye—In that proportion we might get it

Dr. Matthai—If you are able to work up to 4 tons of sugar per acre and increase your output to 600 tons of cane

Mr. Mahajan—Not 600 but 400

Dr. Matthai—Assuming that, if you take the freight from Java into account and the slight freight advantage you have in the Indian market and also the revenue duty of 25 per cent into account you can dispense with protection

Sir Joseph Kay—No, we want a reasonable period to enable us to extend and improve the factory

Dr. Matthai—We are not on that point. We have to satisfy the Government and the Assembly that within a reasonable period—say 20 or 25 years—there is some reasonable possibility of the industry being able to stand without protection

Sir Joseph Kay—That is our considered view, provided there is proper development on the agricultural side and provided research is undertaken

Dr. Matthai—You give your present capitalisation. Can you give us any figures as to the present replacement value of your plant?

Sir Joseph Kay—I am sorry I cannot

Dr. Matthai—I am raising this point for this reason. We have a statement of costs from one of the Upper India factories where they are working about 400 tons a day. They say that their estimate of the replacement value of their plant which is equivalent to yours is Rs. 10 lakhs including buildings

Sir Joseph Kay—I do not know. We paid for this factory Rs. 8½ lakhs

Dr. Matthai—What is suggested is that if you got a modern factory for Rs. 10 lakhs you would be able to reduce your operating costs because the machinery would be better

Sir Joseph Kay—Yes

Dr. Matthai—You have got to add profit to your costs in order to get your fair selling price

Sir Joseph Kay—Yes

Dr. Matthai—If you are going to calculate your profit on your reduced capital of Rs. 20 lakhs it will make a big difference

Sir Joseph Kay—The profit is not only on the capital cost of the works but also on the working capital

Dr. Matthai—The point is that in fixing the fair selling price, the profit should be calculated on the replacement value and not on the book account

President—After making allowance for working capital and everything, the percentage of profit ought to be 10 per cent on Rs. 10 lakhs

Sir Joseph Kay—It ought to be more

President—We allow interest on working capital, say, 7 per cent and then we go to calculate your profit. You will calculate it on Rs. 10 lakhs?

Sir Joseph Kay—I don't think so

Dr. Matthai—Why?

Sir Joseph Kay—I would not start with a capital of Rs 10 lakhs. Somebody has to raise money to start a factory. You could never start a factory with Rs 10 lakhs—simply the value of your Block.

Dr. Matthai—Taking your costs the only item to be added to that is the profit. For your purposes you want the profit to be calculated on 20 lakhs. What we are considering now is whether the sugar industry in the Deccan Canal area would be able at some reasonable time to dispense with protection. Can this industry ultimately dispense with protection, that is the point. So that it is worth while to point out, in order to establish that, that the capital charges are likely to be lower than are borne at present by the Belapur factory. If the present replacement value is Rs 10 lakhs obviously the capital charges would be lower.

Sir Joseph Kay—You are not looking at the matter as I am, you are only dealing with the block account.

Dr. Matthai—In your costs you have included interest on working capital, you have included depreciation, you have included every possible item of cost except profit on the block account.

Sir Joseph Kay—I have not except on the capital of the Company.

Dr. Matthai—Supposing a new company was started that company's capital would be Rs 10,00,000 not Rs 20,00,000?

Sir Joseph Kay—You cannot possibly start a company with a capital which will just pay for its block account and then borrow money. You want more money for working capital to run the factory.

Dr. Matthai—That has already been allowed for in the cost. I am assuming that the running expenses including interest on working capital of the new factory would be about the same as yours. The only factor where there will be a material difference is the capital because they will be able to get the machinery at present rates they will be able to get it for Rs 10 lakhs instead of Rs 20 lakhs which represents your capital expenditure.

Sir Joseph Kay—I don't think so.

Dr. Matthai—The point is that the capital expenditure of this Company was originally Rs 40 lakhs, if you were to float a company you would do it with a smaller capital.

Sir Joseph Kay—Yes.

Dr. Matthai—Assuming that you start a new factory with a block of Rs 10 lakhs, the overhead charges would be considerably less.

Sir Joseph Kay—That is quite true assuming that the plant has not been written down. With the exception of the mill plant all the other plants are written down out of the loss in capital when the capital was wiped off. The value of the block except the factory which was bought cheap has already been written down. For instance our 'buildings' have been written down by 2 43 lakhs, 'plant and machinery' 3 10 lakhs which must bring it far below the market value. The railway siding has been written off by Rs 35,000.

Dr. Matthai—What is the original cost of your factory?

Sir Joseph Kay—Rs 8½ lakhs—delivered at Port. It stands in our books at Rs 12½ lakhs. It was bought at about 30 to 40 per cent below its actual cost.

President—Actually what sum is used as working capital?

Sir Joseph Kay—It is very difficult to tell. It all depends on how manufactured goods are moving. This day we have in the godowns finished sugar amounting to 60,000 maunds. The result is Rs 6 lakhs of money locked up in the godowns now. Ordinarily before the new season commences we finish with the old sugar, but that all depends on the market movements.

Dr. Matthai—You show your working capital to be about Rs 10 lakhs?

Sir Joseph Kay—Yes

Dr. Matthai—Supposing you were producing about 1,500 tons of sugar a year and taking the normal time that elapses before payment, would about Rs 10 lakhs represent the amount of working capital?

Sir Joseph Kay—Yes

President—Fixed capital another Rs 10 lakhs?

Sir Joseph Kay—Much more than Rs 10 lakhs. I should think Rs 10 lakhs would purchase a modern factory.

President—Why did it cost you so much for buildings, roads and so on?

Sir Joseph Kay—The initial mistake was made by spending too much money on unproductive works—that is where the company got into difficulties. Rs 20 lakhs of the money was spent on the estate in developing roads, housing and so on, forgetting that the most important matter was the sowing of cane, growing it and putting it into the factory for crushing. The buildings on this estate cost Rs 5 lakhs. You can do it all to day for Rs 2 lakhs.

President—What about the railway siding?

Sir Joseph Kay—It cost Rs 86,000. That can be done to day for half a lakh. Our own Inland Railway of some 20 miles, although we wiped it down by some Rs 80,000, on the estate cost us Rs 1 lakhs. That can be done to day for Rs 2½ lakhs.

President—Would it be correct to put the cost of erecting a factory similar to this factory as Rs 10 lakhs and railways, roads, buildings and so on Rs 5 lakhs, or a total of Rs 15 lakhs?

Sir Joseph Kay—You can get a very much better factory to day for Rs 10 lakhs and another 5 lakhs for railways, buildings and so on.

President—So that including working capital you want somewhere about Rs 25 to 30 lakhs to float a company?

Sir Joseph Kay—Yes

Dr. Matthai—Your block account on that estimate would be Rs 15 lakhs?

Sir Joseph Kay—Yes

Dr. Matthai—Rs 10 lakhs seems to me to represent about 7½ of the cost of your year's output?

Mr. Mahajan—Yes

Sir Joseph Kay—To-day we have got, say, 5 lakhs of rupees worth of sugar, may be a little less if sugar is going out regularly and our standing crop must be valued at Rs 5 lakhs, that is a total of Rs 10 lakhs. That is to day's position.

Dr. Matthai—Have you any freight advantage in regard to the principal markets for which you cater as compared with imported sugar?

Sir Joseph Kay—I think the advantage is in our favour.

Dr. Matthai—Which are your most important markets here representing the bulk of your production?

Mr. Mahajan—Hyderabad is one of our biggest markets.

Dr. Matthai—How much of your output goes there?

Mr. Mahajan—About a third.

Dr. Matthai—Which are the other important markets?

Sir Joseph Kay—All the others are about the same—Ahmadnagar, Nasik, Poona and Bombay.

Dr. Matthai—Taking last year's sales your average realization per factory was Rs 11-27 per maund. Can you give me the price at Bombay of sugar in 1929-30? That might give us some indication of the average freight advantage you have.

Sir Joseph Kay—We can give you that later on

Dr. Matthai—You would admit I suppose that if the Bombay wholesale price was about Rs 10-8 in 1929-30 and your average realization was Rs 11-2-7 then roughly we might estimate your freight advantage at about 11 annas?

Sir Joseph Kay—No, for this reason. Up to the present we have made pure swadeshi sugar which gets a premium as Indian made sugar. That varies according to the season. If there is a big marriage year more swadeshi sugar is used in the ceremonies and we get better rates than we do in other years. Roughly we should think that about 8 annas a maund would be our advantage.

President—On the question of the amount of protection I see you have suggested that "a bounty should be given should the prices of imported sugar fall below the value on which the basis of protection is fixed." I suppose prices are unlikely to go very much lower unless sugar is going to be given away?

Sir Joseph Kay—One cannot foresee what the world prices of sugar are going to be for sometime. I have seen tremendous drops in prices of commodities which make one wonder what is the low point that they might reach.

President—A bounty is an extraordinarily difficult thing to administer. If one factory gets a bounty, every other factory must get it. In the Provinces where there are very small factories running almost in the fields and keeping no accounts at all, it would be almost impossible to administer the bounty.

Sir Joseph Kay—I had an idea that the price of Rs 10 per maund, Bombay, might cover most of the factories, but I don't feel justified in view of the tremendous developments we have had during the last few years in recommending a definite duty which might suit me and which might appear to be unreasonable to others in view of the difference in factory costs. If you take an average of three years, it would be reasonable. I didn't make any recommendation, because I felt that I would not be justified in recommending anything on the basis of Belapur experience.

Dr. Matthai—What is the measure of protection you claim?

Sir Joseph Kay—I will put it this way. A figure ought to be arranged so that the sugar should not be imported into Bombay for less than Rs 10 a maund.

Dr. Matthai—At present prices it would be an addition of Rs 1-8-0 a maund.

Sir Joseph Kay—Yes, until we have had an opportunity of developing the industry.

Dr. Matthai—Would you be able to meet competition if the price of imported sugar was Rs 10 a maund?

Sir Joseph Kay—Yes, I think so.

Dr. Matthai—That would still mean the Bombay price would have to be Rs 10-8-0.

Sir Joseph Kay—It would be a mistake to put on a protective duty which would make it easy and which would not force concerns to improve the conditions of manufacture and agriculture.

Dr. Matthai—Practically then your suggestion is another Rs 1-8-0 a cwt?

Sir Joseph Kay—If one simply takes the working of Belapur, the answer is we want more, but I don't think that would be a fair view to take in view of the possibilities of increasing the output and reducing the costs by improved types of cane.

Dr. Matthai—What is the period you suggest?

Sir Joseph Kay—10 years at least.

Dr. Matthei —Would 10 years be enough? The assumption underlying the idea of a period of protection is that at the end of that period supposing the duty was abolished or considerably reduced, you would be able to face competition. Now from that point of view you consider 10 years a reasonable period?

Sir Joseph Kay —Ten years would probably be on the low side. We could replace the local cane in 7 years. It means that it would take another 10 years to get the full complement of improved type. So the period would have to be longer.

Dr. Matthei —What would be the period?

Sir Joseph Kay —15 years.

President —Do you think in calculating the amount of protection some allowance should be made for bad seasons? You might get one or two crops which might cause immense damage. If for any administrative reason it was not found feasible to give any bounty, would you suggest that some small addition to the duty should be made on that account?

Sir Joseph Kay —My difficulty is whether or no it would be possible to levy a sliding scale of duty.

Dr. Matthei —Supposing provision was made in the Protection Act that if the price happens at any time to fall below Rs. 10 then Government without reference to the legislature should have the authority to raise the duty automatically.

President —As was done in the Steel Protection Act.

Sir Joseph Kay —I see difficulties there, because of the large business done in forward contracts in sugar. It might be a hardship to importers of foreign sugar. They would be able to get over it, but it would make the transactions very very difficult.

President —Would it be better then to calculate so far as the figures permit, what duty would be considered desirable and then to make a somewhat generous allowance on account of failure of the crop or the possibility of reduction in the price of imports?

Sir Joseph Kay —I think that would be the safest thing to do.

President —Merely a general allowance based on nothing particular. 25 per cent. or something of that sort. Instead of Rs. 2 you suggest Rs. 2.80. Supposing we came to the conclusion that an increased duty of Rs. 2 was a suitable protection and then we made an allowance of 25 per cent. and made it Rs. 2.80. It is not like dealing with a steel factory. You may have all sorts of trouble—short crop and so on.

Sir Joseph Kay —The duty ought to cover the risks.

President —In the *gur* business it doesn't matter so much. If there is a short crop, the price goes up. The imported sugar doesn't compete with *gur*. If there was a shortage in sugar, imported sugar would come in and compete.

Dr. Matthei —The effect of raising the duty by Rs. 1.80 last March has been that the *cif* price has come down correspondingly and if we raised it by another Rs. 1.80 and the price came down, we shall be where we were.

Sir Joseph Kay —I don't see how you can guard against that unless you put the duty very high.

Dr. Matthei —Here is Java depending primarily on this market and you are going to deprive Java of that market and before she decides to eliminate herself you may expect that she will put up a fairly stiff fight.

Sir Joseph Kay —Other countries have had a protective duty to prevent that sort of thing.

Dr. Matthei —They do, but the point is this—supposing the fight is going to take the form of steady undercutting then it would be necessary if your protection is to be effective that safeguards should be provided.

Sir Joseph Kay —Yes, I admit that is the difficulty.

President—From the Java point of view the Act introducing protection for the sugar industry would be a direct challenge. The Java manufacturers would realise that the Indian Government had made up their minds to reserve the market for Indian manufacturers. They would be likely I imagine not to let the grass grow under their feet. Their obvious policy would be to attack and not merely stand on the defensive.

Sir Joseph Kay—The Java man may turn to other markets.

President—That is why I am suggesting some margin above what the figures indicate.

Sir Joseph Kay—Yes. You will have to make it substantial to meet these possibilities.

President—I think the sugar manufacturers in India were rather pleased when on the initiative of the Imperial Council of Agricultural Research the duty was raised by Rs. 1-8-0.

Sir Joseph Kay—Yes. I don't think they were blind to the fact that Java was growing crops for this market. It would not affect me that way. Whether a country would keep on growing sugarcane or beet sugar is a different matter. The whole trouble is that we have to prepare our schemes now for 2 or 3 years ahead. It is the growing crop which has to be dealt with. If we were losing year after year whether we should go on cultivating and growing is a different matter.

Dr. Matthan—From that point of view this is the most difficult enquiry that we have ever undertaken.

Sir Joseph Kay—I quite see that if one legislates for the uncertainties of climate damage to crops, Rs. 10 is too low.

Dr. Matthan—I find most of the sugar producers who have come to us so far have suggested a price for imported sugar stabilised at Rs. 10 at port.

Sir Joseph Kay—That is where we are at some disadvantage. We don't know what the other people are doing in other parts of India.

President—Of course there is some freight protection up country.

Sir Joseph Kay—Yes.

President—One of the importers has told us this that in Cawnpore at all times even in the season of production when Cawnpore sugar is available, although imported sugar is sent up-country and offered at a lower price, the Cawnpore sugar does command a preference.

Dr. Matthan—If they have the same premium on account of their being swadeshi and if we take the freight advantage in places like the United Provinces and Punjab is somewhere about Rs. 1-8-0 then Rs. 10 would help them a lot more.

Sir Joseph Kay—They are in a better place than we are. Taking those matters into consideration I see that my idea of Rs. 10 is too low at any rate as far as this firm is concerned.

Dr. Matthan—If a case for protection could be made out, then protection should be really adequate.

Sir Joseph Kay—I quite agree with you.

President—You are in the tropical area.

Sir Joseph Kay—Yes. We are always told that they grow much cheaper than we do, but we do not know their exact figures. This can only be ascertained by comparing growing costs with sucrose content.

Dr. Matthan—If a man in Upper India is able to grow an acre for about Rs. 850 a year his yield is 25 tons and his extraction is 7 per cent, it is quite conceivable when it comes to the actual cost per maund of sugar he would be at no advantage, on the other hand you would be at a slight advantage.

Sir Joseph Kay—Yes.

President—There is one other point in connection with the duty. It might concern other factories which depend on sugarcane cultivation by *kurvis*. We notice that it is accepted on all hands that in Java the profit taken by the factories themselves in introducing improved canes in villages there has been great. In the United Provinces, for example, it would be a great advantage if the factories got into touch with the agriculturists from whom they bought their cane generally directed more attention to cultivation, increased staff to supervise, organised sale of artificial manure on special terms and so on. If that was to be undertaken by factories, they must first make a fairly satisfactory profit.

Sir Joseph Kay—Yes.

President—One of the points we consider it necessary to examine is whether in introducing the duty allowance should be made for this, that is to say, supposing we considered 10 per cent a reasonable profit for a sugar factory, should some allowance be made to induce the factory to undertake the education of the agriculturists in the vicinity? What is your feeling about that?

Sir Joseph Kay—That is the work of the Agricultural Department and the research institutes that may be set up by the Imperial Council of Agricultural Research.

President—The factory is in better touch with the agriculturists than the Department of Agriculture.

Sir Joseph Kay—Yes.

President—The factory conducts its work amongst them.

Sir Joseph Kay—My feeling is that the grower may resent a certain amount of interference on the part of the factory.

President—In Madras Messrs. Parry and Company apparently are in close touch with the agriculturists at Nellikuppam. The ryots all take their cue from them in the way of growing special canes, the time of harvesting, and so on.

Sir Joseph Kay—If that could be brought about, it would be a step in the right direction. There is some talk about improving our station here. I certainly consider closer co-operation would be of material help.

President—Anyhow the idea is one which might be put before the Directors of Agriculture of Bihar and Orissa and the United Provinces?

Sir Joseph Kay—Yes.

Dr. Matthai—There is a small point in this statement of costs that you have prepared. You have made no allowance for the repatriation of molasses.

Sir Joseph Kay—No.

Dr. Matthai—Because you consider that so uncertain a factor.

Sir Joseph Kay—Yes.

Dr. Matthai—How much molasses do the Nasik distillery people take?

Sir Joseph Kay—They take all we turn out.

President—At what price?

Sir Joseph Kay—It depends upon the price of imported molasses. Last year it went up to a good percentage over the previous figure.

Dr. Matthai—This figure of Rs. 82,000 that you give here as the amount realised for 1929-30, when averaged on 125,000 maunds, might come to somewhere about 10 annas or 11 annas.

Sir Joseph Kay—About 10 annas.

Dr. Matthai—That is the amount realised at the factory?

Sir Joseph Kay—Yes.

Dr. Matthai—So that if you made allowance for that your cost might come down?

Sir Joseph Kay—Yes.

President—What is the total quantity of molasses turned out in 1929-30?

Sir Joseph Kay—40,457 maunds. In 1927-28 for practically the same amount we realised Rs 61,000.

President—Do you sell any for manufacturing tobacco?

Sir Joseph Kay—No.

President—In the United Provinces we are told that they sell it for mixing it with tobacco.

Sir Joseph Kay—Yes.

Dr Matthai—The price that you get here for the molasses would be more or less equivalent to the import price, plus the duty and the freight to Nasik.

Sir Joseph Kay—Generally that is the basis on which the price is based, but they are using a lot of Mohwa flower in the Nasik distillery, so that it is uncertain and often the price of one is played off against the other—whichever is lower.

President—Did you try to send it anywhere else?

Sir Joseph Kay—We tried to send it to Hyderabad, but the railway freight killed it.

Dr Matthai—At the rate at which you have been working during the past three or four years, if you made a profit comparable at all to what you have been making in the past for the next five or six years the whole of that would go into the reserve.

Sir Joseph Kay—The whole of our profits must go into the reserve until the loan is repaid.

Dr Matthai—Unless you increased your rate of profit I assume for the next five years there would be no chance of a dividend.

Sir Joseph Kay—There is still a great deal to be done in the way of expenditure such as additions to our factory and we want to extend the plant.

Dr Matthai—In reply to question No 81 you say "10 per cent on ordinary shares and 7½ per cent on deferred shares." What would you consider a fair rate? Do you think that 10 per cent would be a sufficient inducement for the sugar industry to be developed in India?

Sir Joseph Kay—When I say 10 per cent I am probably conservative in my idea, I am particular about building up reserves, keeping the plant in proper repair and writing everything down to its proper value, before any dividend is declared.

Dr Matthai—Considering the fact that India is one of the most important sugarcane producing countries in the world and the potentialities of the industry, would a rate of 10 per cent be sufficient to bring about a large development of the sugar industry in India?

Sir Joseph Kay—When I say 10 per cent I mean 10 per cent after providing for everything. My own opinion of dividend is that you should never give away more than 60 per cent of your net profits. You ought to make sufficient profit to put the company on a proper sound financial basis.

Dr Matthai—Would 6 per cent be a sufficient inducement?

President—Supposing we allow 6½ per cent depreciation on the block account, 7 per cent interest on the working capital and 10 per cent profit on the block account?

Sir Joseph Kay—I don't think that would be sound. I think you must allow companies to build up their reserve against uncertain times.

Dr Matthai—If we allowed 4 per cent profit for reserve, then over and above that a rate of about 10 per cent would be required to induce people to put their money into the sugar industry?

Sir Joseph Kay—I think that the investing public would want 10 per cent. My idea is I would charge as much as I could to revenue. There is a considerable deterioration. The whole plant will have to be renewed after 10 years. I think that the income-tax figures are reasonable provided we spend a proper amount on overhauling every year, but there is always a tendency to neglect it.

President—Allowing 6½ per cent for depreciation and allowing 7 per cent interest on the working capital and 10 per cent for profit, what do you consider should be taken to the reserve?

Sir Joseph Kay—40 per cent of the profit ought to go to the reserve

President—About one-third?

Sir Joseph Kay—Yes

President—To pay 10 per cent dividend you would have to allow a profit of over 16 per cent on block? That is not the usual practice in India so far

Dr. Matthai—In the case of some industries which we have investigated we have allowed an all round rate of 6½ per cent taking the whole block including land, buildings and machinery. Would you consider that a fair rate if sufficient allowance is made for current repairs?

Sir Joseph Kay—That would depend greatly on the conditions. For instance, take the case of roads. They are unproductive. The sooner they are wiped off, the better. Sidings cost Rs 80,000. What is required is to buy up the sidings proper. Take the other item Rs 55,000. That is all development which must be wiped off, the sooner the better.

President—Really what it comes to is this that the Dutch are able to sell their sugar at a low price because their depreciation is a very small charge and you won't be in a position to do the same.

Sir Joseph Kay—Yes. They wiped everything down. The few Dutch companies I have seen have hardly any interest charges whereas our interest charges alone last year came to Rs 55,000. These items make a tremendous difference when you come to compare the cost of finished sugar.

Dr. Matthai—If we adopt your suggestion that in fixing the rate of profit we should take 15 per cent on the understanding that part of it should be set aside as reserve, we have no means of enforcing this practice, so that it might quite easily happen that all the 15 per cent might be declared as dividend.

Sir Joseph Kay—There is that risk, I quite agree, but I don't think any sound concern would pay the whole of their profit away.

Dr. Matthai—You can't enforce that but if a better managed company puts that sum to reserve every year that puts the company in a better position.

Sir Joseph Kay—Undoubtedly that is so. I know there are several companies that are here on a sound basis. It might give them a distinct advantage. Supposing you had a company with ample reserves, and as you are legislating for a somewhat scattered industry with very great variation in financial conditions, you might possibly have a well-managed company placed in a very favourable position if you put on sufficient protection to meet the weaker ones. In this case it may not be necessary to retain 40 per cent of their profit.

Dr. Matthai—If we had a duty which would stabilize the price at about Rs 10 at the ports and if we assumed that factories in Upper India had a freight advantage of one rupee and their capitalization also was lower, then they would to some extent be able to undercut you?

Sir Joseph Kay—Yes. In view of what has come out of the discussion I can see that my idea of 10 rupees is too low.

Dr. Matthai—It may happen if an adequate rate of protection is granted and a sufficiently long period is fixed, say, 15 to 20 years then these factories in Upper India may extend their business into your markets.

Sir Joseph Kay—I know Cawnpore sugar goes into Indore. They have to bear freight on a portion of their sugar, and they incur freight and charges on articles used in manufacture.

Mr. Padhye—It goes to Hyderabad too but the quantity sold is little because the price is too high compared to the Belapur price.

Sir Joseph Kay—They must market their sugar within a reasonable distance. It is very difficult for us to ascertain where we come into competition.

Dr. Matthan —That is a point we will have to look into

Sir Joseph Kay —We know that one Tulsidas Ramchandin gets Cawnpore sugar into Bombay

Dr. Matthan —I suppose it is a matter on which we might be able to get some more information

President —How do you work these figures out, Mr. Padhye?

Polarization of cane in Java 14 14

Polarization of cane at Belapur 13 54

How have you got this 14 14?

Mr. Padhye —I have assumed that the sucrose extraction by mill in Java is 95. Polarization of raw juice is given as 13 13

President —How do they determine the polarization of cane?

Mr. Padhye —They don't analyse the cane itself, they take the polarization of the mixed juice and the polarization of the bagasse and the total of the two is the polarization of the cane

President —How do they get the polarization of the bagasse?

Mr. Padhye —By regular analytical method

President —I suppose they mix a certain percentage of water?

Mr. Padhye —Yes

President —Then the polarization in raw juice of cane, that you have taken out direct from the mill here?

Mr. Padhye —Yes

President —That is 13 43 against 12 41 for you?

Mr. Padhye —Yes

Dr. Matthan —What do you call raw juice?

Mr. Padhye —Juice that comes out of the mill before it is subjected to any treatment

President —Polarization output per cent polarization raw juice

Mr. Padhye —In that case they assume that the polarization of raw juice is 100 and then find out how much of that has appeared in the product and other by-products that have been made

President —What do you mean by polarization output?

Mr. Padhye —It means polarization not only in sugar but in all the other by-products such as molasses, filtered mud and unknown, the latter being what they cannot account for

Dr. Matthan —In the raw juice it is 89 assuming the raw juice to be 100?

Mr. Padhye —Yes

Dr. Matthan —Unfiltered mud you say 0 7

Mr. Padhye —Yes

Dr. Matthan —So that what it comes to is this that out of 100 pol. in raw juice you recover as sugar 89, in the filtered mud there is 0 7, in the molasses 7 8 and unknown 2 5. That is Java return and yours is polarization return 86 8, filtered mud 0 69 molasses 9 7 and unknown 2 7, so that the difference between you and Java is that more sugar goes into your molasses, that is to say, you are unable to recover as much sugar

Mr. Padhye —That is so, we are turning out more molasses

Dr. Matthan —What is the sucrose content of your molasses?

Mr. Padhye —Last year it was 34 25

President —What is the polarization?

Mr. Padhye —I will have to explain that in detail. In the analysis of sugar or sugar products we have to determine what is called sucrose, which is the pure substance. That is determined by an instrument called polariscope or saccharimeter. The principle of the polariscope is this: ordinary light vibrates in all planes. By means of a polariscope it can be made to vibrate, in one plane only. Such a light is called polarized light. When

this light is passed through a sugar solution, its plane is rotated through a certain angle, which is dependent on the concentration of the sugar solution. The polarization of a substance is the angular rotation of a normal weight of the substance measured in polariscopes or saccharimeters under specified conditions. In the case of pure sugar, polarization represents sucrose per cent but in the case of impure substances such as juice which contains, besides sucrose, other optically active substances such as glucose and fructose which affect the rotation differently, polarization represents sucrose per cent only approximately.

Dr. Matthai—Invert sugar turns it in the opposite direction?

Mr. Padhye—Yes. Invert sugar is a mixture of glucose and fructose. One turns to the right and the other to the left. The result is that the polarization of such a substance is really the effect not only of sucrose but sucrose and other sugars—glucose and fructose. That means that the sucrose that is determined by this method is not correct and in order to get that we have to adopt the other method, what is called double polarization method, to eliminate the effect of the other substances.

Dr. Matthai—Ordinarily when you get a polarization figure, is that single polarization or double polarization?

Mr. Padhye—All single polarization.

President—Then the polarization figure gives not the exact but the approximate percentage of sucrose content?

Mr. Padhye—You are right and the purer the product the less the difference between polarization and sucrose per cent.

President—For instance, in molasses it makes a considerable difference.

Mr. Padhye—Yes. In our molasses the polarization is 29.56 while the sucrose is 34.25, that means a difference of about 4 per cent.

President—In sugar when you say 98 polarization that practically means 98 per cent sugar?

Mr. Padhye—Yes. In the white sugar the difference is negligible.

Dr. Matthai—Raw sugar is 96?

Mr. Padhye—Yes. If you make a regular sucrose determination of raw sugar instead of 96, it may come to 96.1 or 96.2. In our case where we make direct consumption sugar polarizing 99.0, there will hardly be any difference.

Dr. Matthai—Is there any difference between polarization and Dutch Standard?

Mr. Padhye—Yes, because Dutch Standard is really a colour standard. In fact as far as I remember Java used to send some sugar to Japan or China for refining and in order to avoid the duty which was based on Dutch Standard they used to colour the sugar so that it appeared to be a raw sugar. But at the same time high Dutch Standard means better sugar simply because you cannot have good sugar without less colour.

Dr. Matthai—The Dutch Standard that we have in India for Customs purposes is 23 and above, that would represent what polarization?

Mr. Padhye—99.4 and above.

Dr. Matthai—96 would be below 23?

Mr. Padhye—

	Polarization
25 Dutch Standard	99.6
23 "	99.4
20 "	99.15
12 "	98.25

President—You put down crystal obtained per cent cane at 10.8.

Mr. Padhye—That has been arrived at by a formula. As a matter of fact I have got their report in which they say how they got their figure.

President—"Crystal obtained from the juice on per cent of cane"—that means your recovery?

Mr Padhye --Yes

President --Then your next heading "Raw juice net raw juice per cent cane"

Dr Matthai --What does that mean? Does that mean that the juice that you have got is 93 per cent of the cane?

President --In weight?

Mr Padhye --Yes It is really (100 cane plus maceration water minus the bagasse) Sometimes you might get more than 100 juice

President --For Java that is 93.61 and yours is 89.52 per cent That represents the difference that would be obtained approximately by adding one more mill?

Mr Padhye --Yes

President --Now let us take "Brix" The Java return is 17.03 and yours is 16.46 What is the consequence of the difference in brix?

Mr Padhye --That means that their cane is of a better type?

President --Does it mean that there is more solid in it?

Mr Padhye --Yes, and at the same time more sugar The juice is more concentrated in their cane

Dr Matthai --Therefore it affects your boiling house efficiency?

Mr Padhye --I won't say that There is less water to evaporate

President --That means less steam consumption?

Mr Padhye --Yes

President --Therefore it would mean less cost?

Mr Padhye --Yes

President --It would also mean higher extraction per cent of cane?

Mr Padhye --Yes When they start with a richer cane, naturally they must have better sugar recovery That shows that they have already started with a cane which is richer and therefore they get more recovery

President --Polarization of the raw juice is 14.84 for Java as against 13.87 here That also indicates that there is less sugar in your cane than in Java cane?

Mr Padhye --On that I don't agree It might sometimes happen this way If you add more water to your cane juice it would become more dilute, in that case the sucrose will be low

President --What is the consequence of the difference in polarization?

Mr Padhye --I don't think you can deduce anything It is only meant for controlling the process in the factory from day to day Otherwise you can't compare it with the other factories

President --The purity of raw juice is 84.20 in Java and 84.20 here

Mr Padhye --Yes

President --What exactly is meant by purity?

Mr Padhye --We eliminate first the water altogether and that is the figure which you can compare with different factories Raw juice is as good as the Java juice on the basis of purity

President --But it doesn't contain so much sugar

Mr Padhye --If you take 100 lbs juice of Java and 100 lbs juice of Belapur, then of course the Java juice would contain more sugar, because it is concentrated

President --That means they have added less water

Mr Padhye --Not necessarily I can't say that, because they have not given the figure If the juice is already more concentrated, even then with the same amount of water they might get a higher amount of brix You can draw a conclusion to this extent that their juice is more concentrated than ours

President --We cannot conclude until we know how much water they add

Mr Padhye — That is true, but you can take it for granted that when they have got 4 mills, the quantity of water added would be more than ours

President — You can draw a rough deduction, but not an accurate one

Mr Padhye — No

President — What deduction can you draw from the purity of juice?

Mr Padhye — So far as purity is concerned, our juice is as good as the Java juice

President — Does that mean as much sugar in your cane as that in the other cane?

Mr Padhye — Not necessarily. In that case the boiling house efficiency should be as good as the boiling house efficiency in Java

President — What exactly does purity of juice mean?

Mr Padhye — Purity really means sucrose per 100 dry juice. When we say 81, it really means for 100 lbs of dry juice there is 81 lbs of sugar in it

Dr Matthai — So that what you have to get rid of is the same in both cases?

Mr Padhye — Yes. Nonsugar is just the same in both cases

President — That means in your juice there is less refuse of the cane and so on

Mr Padhye — The same quantity of refuse in both cases

President — There is a little better

Mr Padhye — The difference is only 06

President — That represents invert sugar

Mr Padhye — Yes

President — The next is No 6, filter mud. Percent cane, Java 2.42 and in your case 1.11. What is the significance of that?

Mr Padhye — We are not removing as much impurity as they are doing. But that difference, as I said, when you were in the factory might be due to double sulphitation. The elimination of impurities is not carried out to the same extent in our factory as is done in Java

President — There might be less impurities

Mr Padhye — The impurities in our juice and in the case of Java juice are the same

President — You don't remove as much impurities as they do

Mr Padhye — No

President — That might result from additional impurity getting in after the purity was tested. The only impurity was the extra sulphur from sulphitation

Mr Padhye — When they add more lime, they are able to precipitate more impurities

Dr Matthai — That is really the result of double sulphitation as compared with your single sulphitation

Mr Padhye — Yes

President — Polarisation in their filter mud is 3.80 and yours 7.77

Mr Padhye — That is high in our case

President — That means there is more sugar in the filter mud in your case

Mr Padhye — Yes

President — That is to say you have not extracted as much sugar. And dry substance is 87.70

Mr Padhye — When you remove all the moisture, the remaining is the dry substance

President — You have got no return

Mr Padhye—We don't determine moisture in the press cake

Dr Matthai—All these figures in filter mud indicate the amount of clarification done

Mr Padhye—Yes, and at the same time the amount of loss of sucrose

President—What is this juice?

Mr Padhye—It is really juice after treatment before it goes to the evaporators

President—What is the difference between this juice and raw juice?

Mr Padhye—Raw juice is juice before treatment

President—This juice after sulphitation and liming?

Mr Padhye—Yes

President—Brix is 17.09 in Java as against 17.09 in your case

Mr Padhye—You can't make any deduction from that. But the purity of the juice would be the guide to determine to what extent we have removed the impurities. Brix is no indication

President—Why not?

Mr Padhye—Because you start with concentrated juice. The brix would be higher in their case

President—This is not concentrated juice

Mr Padhye—17.09 in their case and 16 in our case. This was after treatment. Then this juice is bound to have higher brix than our juice

President—Purity is 85.20 in their case and 85.12 in your case

Mr Padhye—Yes, impurities removed are practically the same in both the cases

President—No. 8, thick juice. Brix is 60.2 for Java and yours 58.50

Mr Padhye—That just represents concentration done in the evaporator. These figures are not strictly comparable, because their methods of analysis and our methods of analysis may be different which makes a little difference in the brix

President—If there is a difference in the brix, why is the purity about the same?

Mr Padhye—Purity does not depend on the brix. In the case of purity we are eliminating the water altogether—60 per cent solid and 40 per cent water. The chief object of finding the purity is to eliminate this question of water altogether and have it on a comparative basis

President—Purity is really the percentage of sugar on brix?

Mr Padhye—Yes

President—Really if the purity is the same in both cases and if the brix is higher in one than in the other, it means that you are recovering rather less sugar than they are

Mr Padhye—No. It means they are doing more concentration in their evaporators. It doesn't mean anything with regard to recovery at all

Dr Matthai—Your evaporators have not eliminated so much water as they have

Mr Padhye—Yes. We have not eliminated that much water, but at the same time I have made a remark there that 60 and 58½ may actually mean the same thing if we had the same method of analysis. According to their method thick juice may show a higher brix

President—What is A massécuite?

Mr Padhye—That means after sulphitation and liming they have been able to remove 4 per cent. In our case we don't have any second sulphitation. That is the main difference between our sulphitation and their sulphitation

Dr Matthai—Among your improvements double sulphitation is not included. You don't propose to undertake it

Mr Padhye —It means more expense. Instead of double sulphitation they have got some kind of chemicals whereby you can do that sulphitation.

Dr Matthai —They have.

Mr Padhye —Recently we have been promised the supply of chemicals for this purpose.

Dr Matthai —Without sulphitation process you may be able to do that.

Mr Padhye —When you put the chemical in it, you get the sulphur dioxide.

Dr Matthai —It is less expensive.

Mr Padhye —Yes. It looks to be that way. As a matter of fact we have made some laboratory experiments to see whether it is going to reduce the colour and we found that it made the sugar whiter.

Dr Matthai —This double sulphitation is the Java patent which is in use in other countries.

Mr Padhye —Yes. There was a second factory in the Bombay Presidency which practised double sulphitation. With double sulphitation, the quality of the sugar is better than in the case of single sulphitation.

President —A massecuite purity is 80.8 in their case and 85.93 in yours. That is due to second sulphitation.

Mr Padhye —Yes.

President —Purity R. O. what does it mean?

Mr Padhye —Run off. That is a technical term. When you put the massecuite in the centrifugal machine and the machine begins to revolve, then you get the molasses getting out. Instead of calling it molasses, we call it 'Run Off'.

President —Where do they run off?

Mr Padhye —That is again boiled.

Dr Matthai —I suppose the run off in A massecuite is really B massecuite.

Mr Padhye —It probably goes to boil C massecuite.

President —Is this in the vacuum pans?

Mr Padhye —That is taken to the tanks on the vacuum pan floor.

President —Where does it come from?

Mr Padhye —From the centrifugal machines. When you have this massecuite which contains sugar crystals in the machine, the molasses will be separated from the sugar crystals, that is done by the machine.

President —The output of the vacuum pans is called massecuite.

Mr Padhye —Yes.

President —The purity of their run off is a bit higher than yours.

Mr Padhye —Yes.

President —That is the percentage of sugar in it.

Mr Padhye —Yes, because they started with a higher purity. The original purity itself is higher. In the process of boiling our chief idea is to exhaust the molasses as much as possible and that cannot be done in one stage. It has to be done in three or four stages. Some sugar goes with the molasses.

President —Their purity in the run off is greater than yours in the B massecuite as it is in the A massecuite.

Mr Padhye —Their purity is lower.

President —Their purity in the run off is greater than yours. Would you expect the purity in the B massecuite to be greater than yours?

Mr Padhye —It depends on what B massecuite is. Our B massecuite is boiled from the 1st wash. First running is really the run off. After this R. O. comes off we sprinkle water to wash that sugar. This dissolves a small part of the sugar.

Dr Matthai —Don't they do that?

Mr Padhye — They do that. They have what they call double purging method. They put the massecuite in the machines and spin it without water and then remove the sugar. This is mixed with syrup instead of with water and again spun.

President — They add syrup instead of water.

Mr Padhye — Yes.

President — That being so it accounts for the higher purity of your B massecuite as compared with the lower purity of theirs.

Mr Padhye — Yes.

President — In your B massecuite there is a certain amount of wash.

Mr Padhye — 1st is wash and 1st is syrup.

President — The same would apply to C massecuite.

Mr Padhye — Our C massecuite consists of 1st 2nd or 3rd wash and 1st run off. That is run off from A massecuite.

President — That is to say the water which you poured on the sugar.

Mr Padhye — No, it is the first run off before water is added.

President — What is your B massecuite then?

Mr Padhye — B massecuite is the 1st wash boiled.

President — Why is your purity of C massecuite higher than theirs?

Mr Padhye — Our C massecuite contains besides 1st run off some 2nd or 3rd wash. I will give you our system of boiling massecuite in the form of a chart. You start with 1st massecuite and you get first sugar, first run off and first wash. Then you boil the second massecuite and you get from the second sugar, second run off and second wash. It is like that.

President — What is melassequite?

Mr Padhye — That is the D massecuite.

President — Do you make D massecuite?

Mr Padhye — We call it third massecuite. Corresponding to their B massecuite we have wash massecuite, corresponding to their C massecuite we have second massecuite and corresponding to their melassequite we have third massecuite.

President — Their purity is higher than yours.

Mr Padhye — Their melassequite purity is higher.

President — Why is that?

Mr Padhye — That is a question of manipulation.

Dr Matthai — Their actual molasses is a later stage.

Mr Padhye — Melassequite will yield you the final sugar and final molasses.

Dr Matthai — When you have extracted the final sugar, what is left is final molasses.

Mr Padhye — Yes. There is a difference between us and Java. They are better equipped than we are. As you know, when we get the third massecuite or melassequite, it must be kept in the crystalliser for cooling. Unless it is cooled, the dissolved sugar is not crystallized. In their case they have artificial cooling arrangements, that is to say they cool the melassequite artificially by circulating cold water through the massecuite. In our case it is done by an naturally. So, it takes a longer time. The result is that they are able to exhaust the molasses better. That is one point where Java beats us.

President — In the case of this third massecuite, does that go to the vacuum pan again?

Mr Padhye — Do you mean the final melassequite?

President — I mean your third massecuite.

Mr Padhye — C massecuite must be boiled in the pan.

President — Their brix in the melassequite is higher than in your massecuite.

Mr Padhye —That is due to the methods of analysis

President —Your purity of molasses is higher than theirs

Mr Padhye —Yes

President —That means more sugar goes into your molasses

Mr Padhye —Yes

President —What about hours of cooling?

Mr Padhye —They require 24 hours to cool the massecuite, whereas we require 36 hours. Our massecuites are kept for 36 hours

President —What is the effect of shortening the time of cooling?

Mr Padhye —You can exhaust the molasses better in a short time

President —What do you mean by "exhaust"?

Mr Padhye —When you cool the massecuite or any sugar solution, the sugar that is held in solution at a higher temperature is crystallized

President —The quicker you cool the more precipitation you get?

Mr Padhye —It should not be done too quickly. It should be reduced to a particular temperature gradually. This is not under control with us. In their case it is done artificially

President —Then, you have percentage of quintals

Mr Padhye —It is the total massecuite that they get per 100. It has to be reboiled. You boil the first massecuite, bring back the molasses and wash and note the quantity for every 100 quintals. That will give you an idea of how much reboiling they have to do in sugar boiling

Dr Matthai —Of all the massecuites?

Mr Padhye —Yes

President —As regards hectolitres fineness, yours is 276 and theirs is 249

Mr Padhye —That means we have to do more reboiling than they do. The difference is due to the wash

Dr Matthai —That is really to indicate the steam consumption

Mr Padhye —Yes. That is one reason why our steam consumption should be more because we are doing more reboiling

President —As regards molasses, your percentage on cane is 4.08 and theirs is 3.55

Mr Padhye —That is the quantity

President —That is to say they make more sugar and less molasses and you make less sugar and more molasses

Mr Padhye —Yes. There is also another difference. Their molasses is more concentrated while our molasses is more light. If we reduced it to their basis of concentration instead of being more it would be less

President —How do you mean by "more concentrated"?

Mr Padhye —Our molasses contains more water while their molasses contains less water. If we reduced our molasses to their basis of concentration, then the quantity would be less

Dr Matthai —Out of what is properly called molasses you eliminate water?

Mr Padhye —There is some water

Dr Matthai —What does it contain?

Mr Padhye —30 to 35 per cent sucrose, 25 per cent invert sugar, 10 per cent mineral matter and the rest organic matter and moisture. There are some gums and some organic acids in it

President —In molasses brix is 82.51 in your case and 84.8 in their case

Mr Padhye —That shows there is more water. In order to have a comparative basis for molasses it should all be worked on the basis of 100 solids and then only it would be possible to compare figures

President —Polarisation is about the same

Mr Padhye — Yes

President — But the purity that is to say pol/brix is 30.9 in their case and 36.29 in your case

Mr Padhye — Yes, that is the comparative figure. It means we are losing more sugar in our molasses.

President — Although the polarisation is the same?

Mr Padhye — Yes. In their case brix is higher and therefore naturally polarisation would be higher. For instance if our run off is calculated on their basis then our polarisation will be much higher.

President — What is reducing sugar?

Mr Padhye — That is invert sugar.

President — Then figure is higher being 25.0 as against your figure of 19.21. That means there is less invert and more direct sugar.

Mr Padhye — If there is less invert sugar you lose more sugar in the molasses.

President — Then purity (suc/brix) is 14.9 in their case and 11.51 in your case. That indicates the same thing, there is more sugar in yours.

Mr Padhye — Yes. This purity has been found out on the basis of sucrose and not polarisation. It was on polarisation. This purity is on the basis of sucrose and it means more sugar.

President — Sucrose per cent non sugar 59.6 in their case and 70.97 in your case. That shows very clearly that yours contains more sugar.

Mr Padhye — Yes.

President — Reducing sugars per cent non sugar 12.0 in their case and 39.8 in your case. That indicates the same thing.

Mr Padhye — Yes.

President — Ash per cent non sugar 19.7 in their case and 20.9 in your case.

Mr Padhye — Yes.

President — Reducing sugar non sugar quotient. Reducing sugar is invert sugar.

Mr Padhye — Yes.

President — In the raw juice it is the same.

Mr Padhye — Yes, the ratio is the same.

President — In the thin juice?

Mr Padhye — There also the ratio is the same.

President — There is a difference only in the thick juice.

Mr Padhye — Yes.

President — That means in your process some of the sugar comes as invert sugar.

Mr Padhye — In our case it is more.

President — In molasses then invert sugar is less.

Mr Padhye — It means that our molasses is not exhausted to the same extent as theirs.

President — pH Values. Would you explain that?

Mr Padhye — pH value is a number which expresses the activity of the acid or alkali in a mathematical figure. Every acid contains what is called hydrogen ion which causes inversion of sucrose during the manufacturing process. In the case of pH value what we determine is really the concentration of the hydrogen ion which is considered to be the correct method. Formerly with the old method we were determining the total acid without any reference to its activity. Now we determine the activity of the acid. Any liquid showing pH 7 is neutral while anything below 7 is acid and above 7 is alkaline. It is the active acid which is liable to cause damage in the form of inversion.

President—There is very little difference between the two

Mr Padhye—That is so

President—What is the figure below which it should not fall?

Mr Padhye—6.6 is considered to be safe. Below 6.6 there might be appreciable inversion.

President—Aldities mg SO? Thin juice at Evaporators 104 in their case and 100 in your case. What is the reason for that?

Mr Padhye—As you know we have single sulphitation. So, we have to keep the juice more acid. The difference between the Java method and ours is this. They increase the acid in the pans by doing the second sulphitation. We have to do only one sulphitation and so we have to do it for the thin juice.

President—There is more sulphur in your case because you do only one sulphitation.

Mr Padhye—Yes. It is not exactly that there is more sulphur but there is more acid.

President—What is the safe figure for thin juice as regards SO₂?

Mr Padhye—I think that the figures we have given are safe. We do not exceed these.

President—Assortment per cent cane superior head sugar—would you explain that?

Mr Padhye—It shows of the total sugar made how much was superior head sugar.

Dr Matthar—What is this term head sugar?

Mr Padhye—23 Dutch Standard and above. It is the direct consumption sugar.

President—They produce 11.78 superior head sugar while you produce 7.80 superior sugar and inferior second class 3.01.

Mr Padhye—Yes. Still it comes to 23 Dutch Standard.

President—Molasses sugar you don't make any?

Mr Padhye—That comes back in the process.

President—How do they make their molasses sugar?

Mr Padhye—It is made from melasse-cuite. They have probably use for it and have probably a market for it.

President—That is a form of grading.

Mr Padhye—Yes.

President—Analysis of Products. Their Pol superior head sugar is 99.56 as against yours of 99.55. Therefore there is very little difference.

Mr Padhye—That is so.

President—Your head sugar is 98.9. It is not superior?

Mr Padhye—That comes very close. That is what we call really second sugar.

President—Then pol of molasses sugar which they make from melasse-cuite is 88.03, so that it is a very inferior sugar.

Mr Padhye—Yes.

President—Fuel Consumption calories per kilogram of cane. Their figure is 11.4 per cent for supplementary fuel.

Mr Padhye—Yes.

Dr Matthar—11.4 per cent of the total fuel as compared with your 25?

Mr Padhye—Yes.

President—From our point of view what are the most important factors that we should note when we go round the factories?

Mr Padhye—You mean what figures?

President —Yes

Mr Padhye —The most important figures are the mill efficiency figures

President —The grinding part?

Mr Padhye —Yes Sucrose extracted in juice per cent sucrose in cane

President —Is that kind of information given in all the factories?

Mr Padhye —Yes

President —That would give us the efficiency of extraction in the mills as compared with Java?

Mr Padhye —Yes The next one will be the sucrose in sugar per cent sucrose in juice recovered

President —And the next?

Mr Padhye —Along with that you have to consider the sucrose account, out of 100 sucrose in juice how much is lost in by-products and how much is not accounted for The whole skill of the boiling house depends on the unaccounted for If that is much, that means that there is something wrong That may be due to more invert or to more mechanical loss That would be shown by the figure for unaccounted for That unknown should be within limits

President —Another thing would be the percentage of extra fuel Will there be any other figures we should examine carefully?

Mr Padhye —You can see the purities, how they vary from the start That will give you an idea of the clarification The purity should always go higher as we proceed further When we start from the raw juice purity, after clarification it must be higher That means that the purity of the thin juice has to be compared with the purity of the raw juice As we proceed further there will always be an increase, a decided increase as between the thin juice and the raw juice, and a slight increase between the thin juice and the thick juice Another thing is the question of invert sugar That invert sugar is another indication which helps us to control our process Just as we have got purity which is a ratio, in the same way, there is what we call glucose ratio which will always be comparable We determine invert sugar in raw, thin and thick juice and find out the glucose ratio If that glucose ratio begins to get higher, that means that we are losing sugar through inversion

President —From our point of view these will be the figures we should look at?

Mr Padhye —Yes You should look to the boiling house and mill house efficiency The third thing is overall efficiency But this unaccounted for is very important That will at once tell you whether the working is good or bad because the boiling house efficiency as well as sugar lost in molasses will depend on the purity of juice

President —Mr Padhye, I understand that as a result of your investigation in America you came to the conclusion that sugar ought to be produced here at about Rs 8 per maund?

Mr Padhye —I can tell you that then my experience with regard to India was absolutely nil and the calculations which I made were based on actual labour used in American factories I knew the wages that were prevailing here and calculating on that basis I gave the figure of Rs 8 per maund

President —On the basis of the cost of cane?

Mr Padhye —No, that was the cost of manufacture There was another big item which could not be determined That was the fuel consumption That in Indian factories, specially in Harignon, is tremendous as compared to any factory outside India

President —Rs 8 a maund excluding the cost of cane is not very low

Mr Padhye —Leaving aside the cost of cane Rs 8 was the cost including everything

President—You are working up to that now?

Mr Padhye—We hope to be able to do it. We have every hope with this new cane. I said that it was speculative because I had taken actual labour used in American factories. The wages there are so different from our factories here. I have absolutely followed the same standard as in America.

President—If they give you all the machinery you have asked for you will be able to get down to Rs 8 per maund?

Mr Padhye—Yes, if they give me the fourth mill and a properly balanced mill, that is to say the various items mentioned in our replies viz, provision of an automatic cane unloader, addition of a fourth mill, conversion of the triple into quadruple, separate vacuum pump and a condenser for the quadruple, one more vacuum pan, a few crystallizers and centrifugal machines and a boiler, etc.

President—Rs 3 all—in cost of manufacture?

Mr Padhye—All costs exclusive of cost of cane.

Dr Matthai—All the improvements you suggest in the boiling house would be sufficient for all the output of the 4 mills?

Mr Padhye—This factory should not be considered. Even all the suggestions of improvement I have made cannot cope with this mill. Even if we put one more pan it cannot handle all the cane crushed in this mill.

President—I understand that your mill is far too big for your machinery?

Mr Padhye—Yes.

Dr Matthai—What I am trying to get at is this. In the mills the suggestion is the addition of a fourth mill and with the exception of the cane unloader all the others are extensions to the boiling house. Supposing you had a fourth mill added and you had all these improvements in the boiling house, then you get a balanced factory?

Mr Padhye—Not still. Just now our capacity is 325 and if we put a pan, we can come up to 400 while our mill is capable of handling 600 tons.

Dr Matthai—Your mill as organized at present can handle 600 tons?

Mr Padhye—Yes.

Dr Matthai—If you had a fourth mill?

Mr Padhye—We will adjust it to the same capacity but it will improve extraction.

Dr Matthai—Would these improvements that you suggest be sufficient for balancing the factory?

Mr Padhye—No. Even if we had a fourth pan we cannot handle 600 tons.

Dr Matthai—What is the sort of extension you will require? Have you estimated the cost of these improvements?

Mr Padhye—I can't get the figures at all.

Dr Matthai—Approximately can you suggest?

Mr Padhye—About two to three lakhs of rupees.

Dr Matthai—That would handle 100 tons a day. If you wanted to handle 600 tons and balanced the factory on that basis?

Mr Padhye—That means that it should be at least twice that figure.

Dr Matthai—That is about Rs 10 lakhs?

Mr Padhye—Yes. That is the bad feature of this place. Unfortunately we have too big a mill for the boiling house we have. That is why our fuel consumption is so high. In fact we have purposely reduced the mill speed to keep the mill going for as long a time as possible.

President—What reductions do you think you can effect in your costs if you have a mill working 400 tons a day?

Mr Padhye—There will be a reduction of about 12 annas a maund.

President—Simply by putting in a smaller mill?

Mr Padhye — Yes. If we actually had a properly balanced mill our costs would have been certainly within that limit.

Dr. Matthai — All the reduction will be in the fuel?

Mr Padhye — That is the main reduction. There is this thing. Take for instance the question of the 1th mill. I have found that if we have that, our extraction improves by about 8 per cent.

Dr. Matthai — Then your fuel expenses will go up?

Mr Padhye — Not necessarily. When you have the fourth mill it does require some more steam to drive it but at the same time with a crop like last year the extra sugar that we will get would be worth somewhere about Rs 35,000 to 45,000.

Dr. Matthai — That would cover the extra cost?

Mr Padhye — Yes. If we have a fourth mill it does mean more steam but it would be worth doing. But before we do that, we have to increase the boiling house capacity. If it comes to the question of doing it by stages, we would not think of the mill first but increase the boiling house capacity.

Dr. Matthai — If you had all these improvements by how much would you expect the cost to be reduced?

Mr Padhye — By about 12 annas.

President — If you had a well balanced mill, another 12 annas?

Mr Padhye — I wouldn't say that. If the plant is well balanced then it should be 12 annas.

President — If you had scrapped this mill and put in a mill to do 400 tons a day and you had all these improvements then you would reduce the costs by 12 annas. Supposing you kept this mill and had these improvements, what reduction would you expect then?

Mr Padhye — It is very difficult to say. That gives the chances of saving when the mill is balanced the fuel consumption will be less and the expenses of manufacturing will be less because we will not be required to use any extra men, only one man for the extra pan. The output will be greater and the expense will be considerably less.

President — What could we put the reduction at roughly?

Mr Padhye — 6 to 8 annas I should think.

President — 6 to 8 annas with this mill would be reasonable and 12 annas if you scrap this mill and put in a well balanced mill. Is that correct?

Mr Padhye — Yes. In the case of a new mill, probably you can get that at a considerably less price.

Dr. Matthai — Your output is 35 tons of sugar a day or about 850 tons of cane a day.

Mr Padhye — 825 tons is the average.

Dr. Matthai — According to the standards in other countries it would be considered somewhat uneconomic scale of working, would it not?

Mr Padhye — Yes. The minimum they consider as economic is 500 tons of cane a day. In fact in my book I had suggested that the minimum should be 500 tons and a pretty good plant should do 1,000 tons. There was also another consideration when I gave that figure of Rs 8 per maund. I have assumed the capacity of the plant there as 1,000 tons of cane a day.

Dr. Matthai — Supposing you had an economic plant, say with a capacity of 500 tons, then the only substantial reduction that you could expect would be a reduction in overhead charges but there would not be any reduction in the actual operating costs.

Mr Padhye — There is a reduction in this sense that when you have a bigger plant you put in bigger units. For instance take the centrifugal machines. Just now we have got 10 machines. If you have a bigger plant, you still will have 10 machines but they will be managed by the same number of men and the output per man will be greater.

President — How many men do you employ in the factory itself?

Mr Padhye — 325

President — How many in the agricultural part?

Mr Mahajan — During the season about 8,500 for all the operations

President — And out of season?

Mr Mahajan — Nearly 2,000 In the engineering department there are 100 men

Dr Matthai — During the busy season you employ 8,500 men What do you do in the off season? Do you discharge them?

Mr Padhye — Yes We keep only 17 or 18 men

President — Would you have any difficulty in getting labour during season?

Mr Padhye — No

Dr Matthai — You keep only 17 or 18 men

Mr Padhye — Yes They are the men who do the special kind of work like pan boiling, triple, centrifugals, etc

Dr Matthai — That is to say all the other men outside these 17 or 18 men are doing unskilled work

Mr Padhye — Yes It is only a question of training men in a few hours Usually we get all the old men We always have the new men working with the old men so that they pick up the work soon For the special job like pan boiling and centrifugal machines we do want men who are used to them

Dr Matthai — What is the difference in price between your first sugar and second sugar?

Mr Padhye — I think the difference is only As 4 a maund

President — That form would be as good as any if we want to examine the other factories

Mr Padhye — Probably they will have to recalculate That is the Java form

President — Would you draw up a short form?

Mr Padhye — Yes

THE EAST INDIA DISTILLERIES AND SUGAR FACTORIES LIMITED.

**Oral evidence of Mr. C. E. WOOD, and Mr. A. McAUSLAN,
recorded at Nellikuppam on Tuesday, the 1st July, 1930**

(Informal)

Dr. Matthai—Except in Bombay and Madras I think they get generally less than one ton of jaggery per acre?

Mr. McAuslan—I don't know it must be within one ton per acre.

President—Except in South India and Bombay it is about $\frac{1}{2}$ th of a ton per acre.

Mr. McAuslan—The cane we are growing down here is totally different from cane grown in Northern India.

President—On the other hand the price you pay for jaggery would work out to well over 5 annas a maund for cane.

Mr. McAuslan—No, it is about 12 annas a maund.

Dr. Matthai—The real point in basing your price for sugarcane on its jaggery content is that you want to make sure of your sugarcane supply so that if you offered your riyat a price that corresponds with his price for jaggery you would be assured of your supply of sugarcane?

Mr. Wood—If he made all his sugarcane into jaggery he would probably spoil the price of edible jaggery.

Mr. McAuslan—We are hardly working in competition with gum. The position in this district is peculiar in that the riyat grows cane in competition with other crops but very few people in this vicinity growing cane make jaggery themselves.

Dr. Matthai—What other crop do they grow?

Mr. McAuslan—Paddy chiefly and the next is groundnut.

Dr. Matthai—What profit do they make from paddy?

Mr. McAuslan—We have tried to make out that but hitherto without success. The riyat does not keep any record of his expenditure.

President—This system of buying your cane on the jaggery content is not very satisfactory from your point of view. If you were to instal improved machinery so as to extract more juice from the cane, the result would be that you would be paying the value of the extra juice to the cultivator without any advantage to yourselves.

Mr. Wood—It would not be an advantage to us except that we would be able to give them a higher profit but at the same time would hope to have half the betterment. If we bought on a cane basis we should reduce our price for the cane to cover us for the extra cost with the aim that the riyat would get half the betterment and we should get half the betterment.

Dr. Matthai—You might have difficulty in persuading him to accept a lower price.

Mr. Wood—That is so. We have been trying to make him sell on the basis of cane for years.

Dr. Matthai—Then that is a distinct disadvantage, is it not?

Mr. Wood—Yes. At first it would cost us money because though we might say to him "we will put in improved machinery and get more juice out of the cane and therefore you must accept less for your cane by weight", he might not agree to that.

Dr Matthai—You say the cost of cultivating cane is Rs 400P

Mr McAuslan—Last year it was as follows—

	Rs	A	P	
Planting	4	5	6	
Land preparation	21	0	4	
Tops	29	9	7	
Manure	91	5	4	
Cultivation	27	5	11	
Irrigation	62	2	7	It was very low
Sundries	2	5	3	
Fallow charges	52	0	0	that is the rental we have to pay when there is nothing on the land
European supervision	57	7	4	
Cutting	14	8	9	
Carting	13	7	3	
Rental in addition to fallow rental	41	3	9	
Total	416	8	7	

Dr Matthai—Taking fallow and rental together how much is it?

Mr McAuslan—Rs 93

President—Out of that you get about 2½ tons of gur?

Mr McAuslan—The migrant gets on an average 10 to 11 candies per acre of 500 lbs each and he gets Rs 31 per candy. He really gets Rs 31 less Rs 2, that is half the cost here. Between Rs 300 and Rs 350 we reckon as his cost of growing.

Mr Wood—Eleven candies is Rs 341 per acre and he sometimes gets as much as 14 candies per acre.

President—Would you put his cost at somewhere about Rs 300, cutting out fallow charges and European supervision?

Mr Wood—Yes, but then he gets another crop and his average rental of course becomes less. When he leases his land to us he expects more than he would get from anyone else. Then he gets financed by us. We give him about Rs 150 per acre and charge him 9 per cent on it.

President—What about the prospect of increasing the crop?

Mr McAuslan—We are looking to different varieties for that. We can give you comparative figures for the last five years—

From 1915-16 until 1919-20 the average was 1.12 tons of white sugar per acre.

From 1920-21 to 1924-25 it was 1.11 tons. From that date Fiji B came in and the average rose to 1.55 tons, an increase of 40 per cent, that is about 2.8 tons of jaggery. By the substitution of Fiji B for Red Mauritius we have improved by 40 per cent in five years. So we hope to go on improving.

President—Your first disadvantage is the cost of sugarcane?

Mr Wood—Yes, that is the main thing.

President—As far as the South is concerned until the Coimbatore farm can improve the varieties to give you better yield and reduce the cost, it looks as if you would not be able to compete without a substantial duty.

Mr McAuslan—Yes, that is the position precisely. If Java continues this price we cannot compete.

President—What about the cost of manufacturing jaggery from cane?

Mr McAuslan—It depends on the quantity of cane worked. It runs to about Rs 5 to 6 a candy working on a 5,000 candy crop.

President—Can you tell me the percentage of extraction of jaggery referring to an ordinary jaggery mill?

Mr McAuslan—It is somewhere about 60 per cent.

President—Of sucrose content?

Mr McAuslan—The juice extracted amounts to about 60 per cent of the weight of the cane.

President—And there is no prospect of improving, is there, because it depends on the strength of the bullocks? We saw a mill in Combario and when they took out the megasse it was still quite damp.

Mr McAuslan—We reckon to get out 70 per cent of the weight of the cane as juice.

President—Of that juice what percentage do they make into jaggery?

Mr McAuslan—Of the sucrose in the juice we get about 85 per cent as white sugar in bags.

Dr Matthai—I don't quite follow how you make out your statement No 5. Your cost excluding material is Rs 12 and the cost of material is Rs 45 4 and the way you work it out is, you purchase the cane on the basis of Rs 31 per candy of jaggery. You give 100 candies at Rs 88 less 28 per cent treacle at Rs 10 and the cost of 67 per cent you give at Rs 8,040. Are you proceeding on the basis that this is sugarcane jaggery?

Mr McAuslan—That is the position.

Dr Matthai—What you are really doing is buying sugarcane. Only you pay on the basis of the jaggery content but actually the material you start with is sugarcane. If you proceed straight from sugarcane to white sugar you would have less wastage.

Mr McAuslan—We do proceed direct. We ascertain the weight of the juice and we calculate that to jaggery equivalent.

Dr Matthai—Would it be possible for you to give us the actual cost of extracting sugar direct from sugarcane?

Mr McAuslan—This is it.

Dr Matthai—When you make sugar from sugarcane the waste material is molasses?

Mr Wood—We call it treacle.

Mr McAuslan—The jaggery figure is a theoretical figure based on the density of the juice.

Dr Matthai—And Rs 10 is the figure at which molasses is debited in your distilleries?

Mr Wood—No. Rs 10 is a price which we have always taken for treacle and molasses in the old days and is the price at which we reckon treacle and molasses would be saleable in the open market if it had not to go to the distillery. We are really charging the distillery Rs 21/8.

Dr Matthai—Rs 10 is what you find others will get in the open market?

Mr Wood—Yes. There is one other thing that needs explanation. That is gunnies which we have put in at Rs 1-12 0. That is to make it comparable with other places but the figure we pay actually is about Rs 2-0 0 as we use an inner cloth bag also.

Dr Matthai—Comparing the cost of refining jaggery with making sugar direct from cane, you lose both on material and on manufacture, that is to say Rs 2 on material per candy and Rs 2 on the cost per candy and it

appears to me that it is much better for you to confine yourselves to sugar cane if possible and cut out jaggery altogether

Mr. McAuslan—Jaggery gives us continuous working throughout the year. If we confine ourselves to cane we can only work for three months in the year.

Dr. Matthai—We want to find out what would be your fair selling price supposing you had to make all your sugar from cane throughout the year?

Mr. Wood—In estimate No. 6 we estimate the expenses of manufacturing sugar from cane for three months.

Dr. Matthai—About 100 days.

Mr. Wood—The manufacturing season starts about the 1st of February and ends about the 30th April.

Dr. Matthai—I take it the estimated charges that you give here are based on your present costs.

Mr. Wood—Yes, on three months working. We have added nothing for costs if the mill is then idle.

Dr. Matthai—Supposing you had your up-to-date mills, in that case you would be able to reduce the price of sugar practically to the same level as the present Java price.

Mr. Wood—Yes, we can reduce it by Rs. 1.

Dr. Matthai—When we try to fix the fair selling price for an industry, we have got to make sure that the output is an economic output.

Mr. Wood—500 to 600 tons is considered quite a reasonable economic unit.

Dr. Matthai—Increased output would not mean any reduction in these items?

Mr. Wood—No. Labour and general establishment would be the only figure that would go down. Fuel would remain the same, decolorization would be the same, upkeep of buildings and machinery and running expenses would be about the same.

Dr. Matthai—The Java price that you have taken into account is the price under the present increased duty?

Mr. Wood—Yes, the present market price.

President—It seems to me that the prices you have given for jaggery depend partly on the amount you buy. In 1919 you bought 1,539 candies at Rs. 30, in 1920 you had to pay Rs. 49 for 10,000 candies. It looks to me that the prices depend on your demand to some extent.

Mr. Wood—Our demand is always there. We will take all we can get at a suitable price.

President—Your demand depends on the price of sugar. If profits are high, your demand increases and to ensure an adequate supply you can afford to pay a higher price.

Mr. Wood—The price we fix for purchase has to be guided by the price we hope to get for sugar.

President—We examined the wholesale dealers at Coimbatore and they were emphatic that even if the price of white sugar was reduced, the people in the villages would still go in for gur.

Mr. Wood—Towns are becoming more accustomed to using white sugar.

President—Is there any relation between the prices of gur and white sugar? Could you give us a list of prices for cane jaggery?

Mr. McAuslan—We can give you the prices we have paid for cane jaggery equivalent of cane brought to our factory.

President—What relation would your figures on the basis of jaggery content bear to the market price of edible jaggery?

Mr Wood —None whatever

President —You could not give us the market prices?

Mr Wood —They can probably be got from the Chamber of Commerce, Madras. I think they have a weekly report of cane jaggery prices.

Dr Matthai —These prices you offer on the basis of jaggery content have no relation to the prices of jaggery in the market. What was your object in adopting this method?

Mr McAuslan —I don't know how it originated. Presumably when we commenced crushing, it was the only basis the natives could understand and would accept.

President —Your arrangement with tenants is that you give them an advance and in return they supply you with cane at a fixed price, the price being calculated on the jaggery content.

Dr Matthai —And the price being fixed 15 months ahead, anything might happen.

Mr Wood —Yes.

President —Do you buy for cash at all?

Mr McAuslan —Very small quantities. Somebody from an outlying station probably would come along with a truck load. It won't amount to more than 50 tons in one season.

President —You claim that the factory confers definite advantages on the cultivator. He depends entirely on you for sale of his cane, for the introduction of improved varieties and better methods of cultivation.

Mr Wood —Yes.

Dr Matthai —Really your 500 acres stands as a kind of model farm?

Mr Wood —Yes.

President —I take it you are not an applicant for protection.

Mr Wood —Not yet, we are Members of the Sugar Producers Association and believe they are applying.

President —They have asked for an extension of time to prepare their representation. The position is rather a dilemma, because in order to make sugar refining a satisfactory proposition in India you must reduce the price of sugar cane somehow. If, on the other hand, we are asked to put on a tariff, it would mean taking away one inducement for the cultivator to improve his output.

Mr Wood —I don't think the cultivator would take the initiative for improving his crop. He has to be shown just as they do in Java. I don't think you can say that an increase in duty would stop the cultivator from improving his cultivation. He is prepared to better the methods of cultivation if he is shown how to do it.

President —On the other hand would not an increase in duty tend to increase prices? I don't know whether it will have any effect on the gur market. If it had any effect on the gur market, it might decrease the consumption of gur. In any case what we really want to do is to cheapen the price of gur which cannot be effected by an increase in the duty.

Mr Wood —Looking at it purely from an economic point of view, I would say "take off all tariffs. Let Java sugar come here at Rs. 25 a candy."

President —If it comes at that price, I presume it will displace gur.

Mr Wood —In towns it would be probable.

President —You were saying just now that the acreage has increased this year.

Mr Wood —They are satisfied with the price they are getting for sugar cane which is really a better price than what they would get if they grew any other crop.

President —The price of groundnut has suddenly dropped.

Mr. Wood —It has been going down steadily

Dr. Matthai —If we want to fix a fair selling price for sugar, we have to get a normal figure as the price of the sugarcane. Now the price of the sugarcane depends upon the price of other crops

Mr. Wood —Yes

Dr. Matthai —Take the case of wheat or cotton. There, the market being an export market it would be difficult to fix a fair selling price. It becomes therefore extraordinarily difficult to fix anything like a normal price for the Indian sugarcane. One year it may be satisfactory to the riyat and another year it may not be. Therefore it looks to me that if your sugarcane is to be a stable proposition, it would be necessary for the factory itself to have complete control over it

Mr. Wood —Yes

Dr. Matthai —If the thing is left to the riyat, he will cultivate sugar cane only when he finds it profitable and he will make it into gur if the price is favourable

Mr. Wood —Yes

President —For instance, in the Punjab there are a few refineries and much gur is sent to Bombay

Mr. Wood —Yes

Dr. Matthai —You have not got a statement of the prices that you have paid for your cane on the basis of the jaggery content over a period of years?

Mr. McAuslan —I have not got a statement, but I have got figures

Dr. Matthai —Can you give us those figures?

Mr. McAuslan —Yes. For how many years do you want it?

Dr. Matthai —If you could give it to us for the same period as for jaggery, it would be useful

Mr. McAuslan —Yes

Dr. Matthai —In the case of an ordinary industry which is not an agricultural industry, it is possible for you to arrive at normal figures. But if you take the whole country in a case like sugar where the agricultural costs vary very much from one part of the country to another, it is very, very difficult to fix a fair selling price which would be applicable to the country as a whole

Mr. Wood —Yes

Dr. Matthai —If you take an area like the United Provinces, there the price of sugarcane will depend largely on the wheat and here it would depend on the price of groundnuts. The expenses of cultivation would be different in the two cases

Mr. Wood —Yes

President —And the output also would be different

Mr. McAuslan —Here it depends more on paddy than on groundnuts

Dr. Matthai —The riyats from whom you are buying your cane, have they got any cash crop other than sugarcane? Generally what happens is that a riyat just cultivates enough paddy for himself and his family, and has a bit of land under sugarcane. When he has got to pay rent or kist to Government, he meets that out of the sale proceeds of the sugarcane

Mr. McAuslan —A riyat may have half an acre planted with 'sugarcane' and another half an acre with something else. When he is pressed for money, generally for kist, he would come along to us and take an advance. We give our advance in three stages, primarily for the purpose of manure. That is given in two stages at Rs. 50 an acre each time, and the third instalment is usually reserved to meet such things as Government kist, cost of cutting and carting the sugarcane, etc

Dr. Matthai —He has to repay you the advance which he does out of the money realised by the sale of cane?

Mr McAuslan —When he takes the advance, he undertakes to repay it in the shape of sugarcane

Dr Matthai —That comes to the same thing

President —What are the influences affecting the prices of cane and oil gum in this part of the country. Does it depend on the climatic conditions, the outturn of crop, etc?

Mr Wood —I think that it depends upon the quantity planted

President —And the area under cultivation?

Mr Wood —Yes

President —What are the climatic conditions adverse to the sugarcane crop?

Mr McAuslan —Very dry weather at this time of the year and later on high winds, and too much rain

President —That would affect the output of the sugarcane and the sucrose content?

Mr McAuslan —Yes

Mr Wood —If the report goes round that the cane season is bad, the price of edible jaggery will go up

President —If there is a prospect of a bumper crop, the price of jaggery goes down and you get the cane cheaper?

Mr McAuslan —It is very difficult to compare edible jaggery with the jaggery we purchase here. It all depends upon the prospects of paddy, so far as our own cane is concerned

President —If there is a good paddy crop?

Mr McAuslan —If there is a good paddy crop, the prices of paddy are likely to be low. Then, the chances are that the raiyat will go in for cane. If there is a poor paddy crop, he will not go in for cane but will go in for paddy in anticipation of a better market

Dr Matthai —You mean next year?

Mr McAuslan —Yes. That applies to the area in the immediate vicinity of the factory

Dr Matthai —You have given us an estimate of the cost of your improved plant putting it at Rs 25 lakhs

Mr McAuslan —Yes

Dr Matthai —Supposing you had to build a new factory for dealing with 500 tons of sugarcane a day on improved and up to date lines, that would cost you about Rs 25 lakhs?

Mr Wood —It would be about that including the buildings. We have got quotations for plant delivered at the works in Europe—viz., £100,000

Mr McAuslan —That is for a bigger factory whose output is 1,000 tons a day

Dr Matthai —The item under which you could make considerable economies is "depreciation", etc

Mr Wood —Yes, if you could get a bigger output as the item includes selling charges and administration, etc

Dr Matthai —In the works costs you get economies in the general establishment charges, etc. In the overhead charges you might make considerable economies in depreciation

Mr Wood —You mean if we have a plant capable of dealing with 1,000 tons instead of 500 tons?

Dr Matthai —Yes

Mr Wood —Not much

Dr. Matthai—That may be true as far as the items in the works costs are concerned. But take depreciation.

Mr. Wood—You mean depreciation on buildings or machinery?

Dr. Matthai—At what rate are you taking depreciation?

Mr. Wood—5 per cent on an average. We have taken the figure at which the London accountants depreciate our factory and based ours on that.

Dr. Matthai—Have the Income tax people separate rates for sugar machinery?

Mr. Wood—I think so. Then rate is fairly high.

Dr. Matthai—Is it $7\frac{1}{2}$ per cent?

Mr. Wood—Yes. A thousand ton factory is more economical than a five hundred ton factory, but it cannot be very much. If you take the item 'Labour and general establishment—Rs. 380 a candy' there is not a great deal to save on there.

Dr. Matthai—As far as your cane sugar is concerned, 10 annas a candy might make all the difference.

Mr. Wood—If we decided that in India factories should not be smaller than a 1,000 tons we might say that it is unprofitable to work a 500 ton factory and rule them out of consideration.

Dr. Matthai—What is the position about the Northern India factories?

Mr. Wood—I do not know.

Dr. Matthai—My impression is that they are larger.

Mr. Wood—I think they crush more than we do.

Dr. Matthai—Your Samalkot factory is not working?

Mr. Wood—No.

Dr. Matthai—As a matter of fact, that is the biggest sugarcane mill in the Madras Presidency?

Mr. Wood—Yes.

Dr. Matthai—That is largely a question of competition with gur?

Mr. Wood—Yes.

President—What is the actual percentage of white sugar output in this factory here?

Mr. McAuslan—In terms of what?

President—Percentage on the cane?

Mr. McAuslan—We get about 11. (Answer should be $10\frac{1}{2}$.)

President—Is not that very high?

Mr. McAuslan—Yes, because we are dealing with a rich cane.

President—Java is doing only as much as that?

Mr. McAuslan—They are doing more.

Dr. Matthai—Can you tell me roughly, if you are going to have an improved plant, in what respects, the processes here would be altered?

Mr. McAuslan—Instead of having two mills, we would have one mill with all our boilers together. In the first place the saving would be in fuel and labour. There would be an immediate saving under those heads. Then our filtration arrangements would be altered. There would also be a reduction in decolorising costs but the reduction there would depend on the consideration whether we are going to continue refining palmyra jaggery or not. If we are continuing palmyra jaggery, we would retain charcoal, and treat our cane juice with charcoal. We would have to get larger evaporators which would lead to considerable economies in labour. We would have to have much larger vacuum pans which would lead to a reduction in the skilled labour and our centrifugal cost would be much less per unit.

Dr. Matthai—What about decolorization?

Mr. McAuslan—That depends on the price we can afford to pay for palmyra jaggery which in turn depends on the price of white sugar.

Dr. Matthai—It depends entirely on that factor?

Mr McAuslan — Yes

Dr Matthai — Supposing you could get all your sugar from your cane then you would prefer the sulphitation process?

Mr McAuslan — Yes

Mr Wood — Yes, because that is cheaper. Though we have no definite figures, yet I think char is a better process, i.e., a better sugar results.

President — These improvements would result in reductions under the heads decolorization and fuel and labour.

Mr McAuslan — Yes

President — Which you have already estimated in this statement?

Mr McAuslan — Yes. There would also be some reduction under supervision and establishment.

President — Labour and general establishment does that not include supervision?

Mr McAuslan — It does.

President — In your estimated cost of sugar from cane, you say "Cane purchased on basis of Rs 31 per candy, etc." I want to know whether a considerable proportion of your cane is produced by you direct.

Mr Wood — Yes, about 20 per cent.

Dr Matthai — Does that work out at the same price?

Mr Wood — Do you mean our own cane?

Dr Matthai — Yes.

Mr Wood — It is more expensive.

President — Really this estimate errs on the low side if anything.

Mr Wood — We have to wash out anything concerning our own cane. Our own cane is there for insurance purposes.

President — Did you make this estimate computable?

Mr Wood — Yes. We would rather not grow our own cane, but we have to. We did not grow our own cane at Samalkot. As a result one year the raiyats came and told us just as crushing was ready that they were not going to get their canes crushed, and next year they brought only a few canes. If the price of jaggery was high, they decided to make their cane into jaggery. After that experience we have had to give up crushing cane there. If we had had 500 acres under sugarcane, we would have got the mills going. And probably been able to induce the raiyats to crush a large part in our mill.

Mr McAuslan — The only way material can be cheapened is by getting greater yield per acre.

President — Have you any ideas regarding the suggested introduction of a licensing system under which no other factories would be allowed to work within a certain radius of an established factory so as to give the latter a certain security as regards the supply of material?

Mr Wood — No. I think it is healthy to avoid excessive competition.

President — It was suggested that if a duty was put on white sugar to such an extent as to make sugar refining a very profitable undertaking, the result would be an increased demand for suitable sites for sugar factories. The obvious location is in the vicinity of an existing factory where there are large supplies of cane. Competition would then arise between the factories for the supply of cane. A large increase in the price of sugarcane might result while neither factory would work satisfactorily or obtain a sufficient supply of cane.

Mr Wood — If you are going to start licensing for sugar manufacture how will it be possible to avoid it for other things?

President — The condition of the sugar industry is very peculiar. If you want to manufacture steel in England you can obtain manganese from

India, but sugarcane cannot go more than 10 miles from where it is cultivated

Mr Wood—I am totally against Government giving financial assistance to start any industry, where another industry of precisely the same nature is established within a reasonable distance, but I think possibly in the case of the sugar industry it would be desirable to prevent competition of the sort named

President—So to some extent you are in favour of it?

Mr Wood—I don't like the principle, but from the practical point of view it has good points because a tremendous lot of harm could be done to the industry by anyone with large financial resources coming in and starting a factory alongside and entering into competition for the crop

Dr Matthai—But is there any practical means of doing it? Take an area where the land is in the hands of a hundred people. First of all can you enforce licensing?

Mr Wood—We would give each mill a 20 mile radius. If people wanted to take their cane to a more distant factory, let them do so. If the other factory is prepared to give a higher price, let it do it

President—Do you mean some regulation by which a company will not be registered unless it complies with these conditions?

Mr Wood—Yes

Dr Matthai—If we give assistance to the sugar industry by means of a duty, we have not the means of enforcing the conditions because the assistance is by means of a general rise in the price of sugar

Mr Wood—Are you out to help the individual manufacturer or are you out merely to ensure that sugar is manufactured in India? If you are out to see that sugar is manufactured in the country, I am inclined to think you can let manufacturers fight one another within limits

President—You mean that the more efficient of the two would probably survive?

Mr Wood—Yes

President—You are authorised to speak on behalf of your Firm?

Mr Wood—Yes

President—What are the general views of your firm? I understand your firm is not contemplating any application in the matter?

Mr Wood—No. I think we shall probably endorse the application of the Indian Sugar Producers Association if they send you one

President—But the fact that you won't apply for protection does not mean that you are not encountering any difficulties in the manufacture of sugar. These, so far as we understand, are first of all the cost of raw material which as compared with Java is very high and can only be reduced by improving the quality of the cane planted by the agriculturist. Secondly, the difficulty of securing a steady supply of cane. Thirdly here at Nellikuppam your system of purchasing by jaggery content is a hindrance to efficient working because in the first place the constant weighing and measurement of the juice of each cultivator's consignment causes an interruption in your work which is not so continuous as it would be otherwise and secondly in the absence of any arrangement to the contrary any increase in the extortion would be to the advantage of the riyat and not to you

Mr Wood—Yes, but with regard to modernisation we are working in that direction and I think we can say that it would only be a short while before we could get the riyat to sell his cane on a different basis

President—Are there any other particular difficulties which you have experienced? These are the main ones I think

Mr Wood—Yes. I think we ought to consider the (palmira) jaggery industry on its own basis. It is a distinctly failing industry and unless we can maintain the present prices for jaggery there will in a few years be no

supplies for refining purposes. If we want to maintain the supply of palmyra jaggery for refining purposes it is necessary to continue giving the present prices for it.

President—Then I gather that you consider that the question of reduction of price of raw material is essential. The continuance of the factory is beneficial to the agriculturist because the extension of the cultivation of improved cane is due to your factory if you regard the continuance of factories in India as of great benefit to the agriculturist.

Mr. Wood—Yes.

President—Do you think a tariff is necessary?

Mr. Wood—Yes, I think a tariff is necessary, judging from our own experience here, for a number of years, until we can get over these difficulties, especially the low output of cane is compared with Java.

Dr. Matthai—As all the imports practically come from Java and all their distribution is done through a syndicate, it is very easy for them to cut under your tariff and therefore if we are going to embark on a policy of protecting the Sugar Industry the duty must be pretty high. In the case of other industries you get a certain amount of competition among importers but in the case of sugar practically the whole of the 850,000 tons comes from a single syndicate.

Mr. Wood—That is right. The other way might be to form a Sugar Trust in India which would buy from Java the requirements of India, and to prohibit any other import.

Dr. Matthai—You mean a Government controlled organisation in India?

Mr. Wood—Yes. Legislation could be introduced to the effect that no body is permitted to import sugar except this Trust. Let us say the annual requirement of India is 800,000 tons.

Dr. Matthai—If India produces 200,000 tons extra, correspondingly the quantity of imported sugar will be reduced?

Mr. Wood—Yes. The Sugar Trust would be the only seller of Java sugar and it would raise the price in order to protect the sugar producer in India.

President—It requires rather elaborate control.

Mr. Wood—It is only a thought which has just occurred to me. The Trust may be composed of commercial people and the price at which they should sell the sugar would be determined by Government.

Dr. Matthai—The existing duty on sugar is Rs. 6. Supposing we find that Rs. 6 is the measure of protection required it should be declared a protective duty. Along with that we may have a provision that if at any time the import price of Java sugar is below the price that we have taken into account, Government without any reference to the Legislature can increase the duty correspondingly. If you have a provision of that kind the Java importer would be careful. It would not be necessary for you to put it into operation every time. We did it in the case of steel.

Mr. Wood—That would get over the difficulty.

President—I gather your view is that whatever happens to the duty on imported white sugar, there is no particular danger of the agriculturists giving up the cultivation of sugarcane on account of Java competition.

Mr. Wood—He will continue growing some sugarcane for the edible jaggery.

President—The real danger as regards the growing of sugarcane is that the price of paddy or some such crop may increase.

Mr. Wood—Yes. But supposing we decided here not to refine, instead of planting 2,500 acres of cane round this factory they would probably reduce it to 500 acres and make only edible jaggery.

President—You don't happen to know whether the Sugar Producers Association have sent any representation to the Government of India on the subject

Mr Wood—I don't think they have. They have not referred to us any letter which they have addressed to the Government of India, but I have an idea that they are in favour of the Tariff Board enquiry.

Dr Matthai—Mr McAuslan, could you kindly give us a note on the present processes of manufacture both from cane and palm, jaggery, and also a note to indicate the directions in which it might be possible to improve?

Mr McAuslan—Yes, certainly.

INDIAN SUGAR PRODUCERS' ASSOCIATION.

Oral Evidence of Messrs J. M. LOWNIE, Chairman, and J. G. RYAN, Honorary Secretary, Indian Sugar Producers' Association, recorded at Cawnpore, on Thursday, the 30th October, 1930.

President—Both of you, Gentlemen, are representing the Indian Sugar Producers' Association?

Mr Lownie—Yes

President—Mr Ryan, what firm do you belong to?

Mr Ryan—I am the Secretary of the Upper India Chamber of Commerce

President—You don't belong to any firm?

Mr Ryan—No

President—You are also Secretary of the Indian Sugar Producers' Association?

Mr Ryan—I am the Honorary Secretary of the Indian Sugar Producers' Association

President—Mr Lownie, you represent Messrs Begg Sutherland and Company?

Mr Lownie—I am a Director of Begg Sutherland and Company, Ltd. In this case, I am the Chairman of the Association

Dr Matthai—What is the total membership of the Association?

Mr Ryan—We have, I think, 26 members. I have sent you a list containing the latest membership

Dr Matthai—It represents, I suppose, practically every sugar producer who produces on a large scale?

Mr Ryan—We represent well over 90 per cent of the white sugar producers in India

Dr Matthai—Are there any people who are mere growers of sugarcane in your membership?

Mr Ryan—We have the Bihar Cane Growers' Association who are purely growers

Dr Matthai—Are they members of your Association?

Mr Ryan—Yes, as an Association and their Secretary is on our Committee

President—Have you any members from other provinces? Are Messrs Parry and Company members of your Association?

Mr Ryan—We have two members from Madras representing Parry's interests down there

President—What about Bombay?

Mr Ryan—We have the Delaput Company from Bombay. We have Messrs Finlay Fleming and Company from Burma

President—So that you can claim to be fully representative of the whole sugar industry?

Mr Ryan—Entirely

Dr Matthai—Can you tell us approximately what is the total capital represented by your Association?

Mr Lownie—I am afraid it is a figure we have never gone into

Dr. Matthai—It is only to give one a general idea of the extent of the interests you represent

Mr. Townie—I can give Begg Sutherland's figure

Dr. Matthai—An approximate figure will do

Mr. Ryan—It would simply be a guess

President—Begg Sutherland's represent one third of the white sugar produced in Upper India?

Mr. Townie—Yes. We represent the following five companies—Oawn-pore Sugar Works, Limited, Champaran Sugar Company, Limited, Samastipur Central Sugar Company, Limited, Rjam Sugar Company, Limited, Purnabpore Company, Limited

Dr. Matthai—If we took the total production of white sugar in India as approximately 120,000 tons

Mr. Townie—That is including gur sugar

Dr. Matthai—Including khandasari sugar?

Mr. Townie—Yes

Dr. Matthai—Out of that, 60,000 tons is white sugar made in factories?

Mr. Townie—Yes

Dr. Matthai—Out of that, 50,000 tons is represented by your Association?

Mr. Ryan—More than that. Those who are out of that would be quite on the small side. It might be of interest to furnish you some domestic information—I mean the preliminary memorandum which we submitted to the Royal Commission on Agriculture. This does not appear in our representation to the Board because it is only a preliminary memorandum given to the Inison officer. This is the one (handed in) which contains the full history of the Association and certain other activities. I have here five copies available. The membership has naturally gone up. It is given there as 10 but it is now 26

Mr. Townie—Referring to Dr. Matthai's question about capital, there are two figures viz., authorised capital and invested capital

Dr. Matthai—Yes

Mr. Townie—I could give you a rough guess about the authorised capital but not about the invested capital. I can only give you our own figures. They may be taken as fairly average figures for the other factories under other companies that are in this Association

Dr. Matthai—Supposing we took about Rs. 10 per maund of white sugar made in India, that would give you an approximate figure?

Mr. Townie—Yes

Dr. Matthai—It is about Rs. 5 crores?

Mr. Townie—Yes. That is fairly near it

Dr. Matthai—The importance of it is that statements made by your Association represent really the opinion of the industry in the country?

Mr. Townie—Yes. Our statement for example was considered at a general meeting. Every member was not present but I think we had about 75 per cent of the members of the Association present

Mr. Ryan—This memorandum is entirely authoritative, because the draft was issued to members before adoption. Though one or two changes were made at the meeting, substantially it was accepted by the whole Association

President—Dealing with the conditions of the Fiscal Commission, under the head of natural advantages we notice from your memorandum that you are very candid in admitting that as compared with Java the Indian industry suffers under certain fairly clear disadvantages, but it occurs to us that it would be hardly correct in estimating the natural advantages of the industry as a whole to take Java for comparison. It would be better

and failed to take some other country which, while able to turn out sugar at an economic price does not enjoy such great advantages as Java.

Mr. Townie—Our reason for taking Java is that Java is our competitor and to a certain extent European beet too where of course the conditions are entirely different.

President—If we were to consider the position of the Indian industry under circumstances of free trade throughout the world, India would be able to produce sugar at least as cheaply as a considerable portion of the world's supply would then be produced.

Mr. Townie—Mauritius for instance.

President—Or even perhaps the West Indies.

Mr. Townie—Take Mauritius which used to send very nearly the whole of their output to India. In pre-war days it was a competitor of Java. They sent about 200,000 tons to India and Mauritius could compete with Java in those days but we know that climatically and scientifically they were not as far ahead as Java but after the war Mauritius sugar went largely to Great Britain because of the preference. India might be considered practically on a par with Mauritius.

President—What sort of cost of production prevails in Mauritius on the average? Can you give us any idea?

Mr. Townie—No.

President—If you take the West Indies, it is about 15 shillings a cwt?

Mr. Townie—I think 125 shillings is the figure mentioned in Lord Olivier's report. About the same time there was a report on the Mauritius industry published by Sir Francis Watts who went out from Great Britain. I could put my hand on that, and that will probably tell us what would be the cost in Mauritius.

President—If you take the world's demand at 25 million tons—I think that is about correct?

Mr. Townie—Round about that figure.

President—If there was free trade and no subsidy, bounty or protection of any kind, you could really eliminate the whole of the beet sugar. Cane sugar would be very much cheaper to produce than beet sugar, if there were no protection or subsidies of any kind, then India even with her present cost of production would find a market, at any rate she would be able to supply her own market.

Mr. Townie—I don't think so. India would only be able to supply such sugar as for sentimental reasons and religious reasons certain sections of the population demanded.

Dr. Matthai—If we leave Java and Cuba out of the sugar-producing countries of the world and compare the position of India with the other sugar-producing countries, don't you think that within a reasonable time Indian costs would be comparable with the costs in the great majority of those countries?

Mr. Ryan—I could not admit that for Australia.

President—The Australian costs are much higher.

Dr. Matthai—We are now talking of the conditions of the Fiscal Commission. One of the conditions of the Fiscal Commission is that an industry in order to deserve protection must be in a position in course of time to produce at a cost which will enable it more or less to withstand competition without protection. Leaving out countries which are rather exceptionally placed like Cuba and Java, the position of India in point of costs would not be worse than the great majority of the sugar-producing countries of the world.

President—I might say we are not dealing now with the necessity of protection or the amount of protection. We are merely dealing with the general question as to whether the industry qualifies for protection by having

certain advantages. We consider that it is quite reasonable to interpret the Fiscal Commission's condition in the sense that the natural advantages are natural advantages which we might consider the country would have under conditions of free trade throughout the world.

Mr. Ryan—That is reasonable.

Mr. Lownie—It fulfils the conditions for the Tariff Board enquiry.

President—In other words, in considering whether India has natural advantages, it would be quite reasonable to exclude Java and Cuba which, though admittedly the cheapest countries in the world, could only produce a fraction of the world's requirements. Java can produce 3 million tons and Cuba about 5 million tons. That comes to about 8 million tons which is about a quarter of the world's demand.

Dr. Matthai—If you take two-thirds of the production—I don't think that we shall be far out if we take 15 shillings as the normal average cost in those countries outside Cuba and Java. That would come to Rs. 10 a cwt. or Rs. 7-8 a maund.

Mr. Lownie—That is the figure we have been working at. Here the cost is Rs. 7-8 a maund.

President—Is it without overhead?

Dr. Matthai—Does it include depreciation?

Mr. Tonnle—Taking our own factories it is about that figure including everything.

Mr. Lownie—In the sense that it will be bolstering up an industry with the bulk of the sugar producing countries in the world.

Mr. Ryan—That is in the hypothetical case of the exclusion of the two formidable competitors.

Dr. Matthai—When we fix the rate of duty appropriate to the Indian sugar industry then we have to take into account the price of Java sugar.

Mr. Ryan—Yes.

Dr. Matthai—If we gave protection to the Indian sugar industry that protection would not be thrown away in the sense that there would never be an industry in the country without protection.

Mr. Lownie—In the sense that it will be bolstering up an industry which is entirely uneconomical? That is what you mean I suppose.

Mr. Ryan—You are including in the picture the beet producing countries, are you not?

President—Then costs are very high.

Mr. Lownie—Yes.

President—In other words, the claim for protection may be said to arise in a sense from the measures taken by other countries to protect their own industries?

Mr. Lownie—Yes.

Mr. Ryan—It is a protection against what we call unfair competition.

President—All that you claim is that India should take measures to protect herself against the aggressive action of other countries?

Mr. Lownie—That is so.

Dr. Matthai—Can you explain to me how exactly these various factors mentioned in your memorandum hit the Indian industry? You speak of the amount and distribution of the annual rainfall, the quality of the soil, temperatures and the prevailing system of land tenures. What precisely is the point about the rainfall in Java? Is it greater and more regular?

Mr. Lownie—Yes.

President—And better distributed throughout the area?

Mr. Lownie—The rainfall is more regular and better distributed.

Dr Matthai—You are speaking for the time being of the sub tropical area in India?

Mr Lownie—Yes, of Bihar and the United Provinces which form the largest area producing white sugar in India.

Dr Matthai—To the extent that you don't have the same amount of rainfall and the same regularity, your costs of cultivation are higher?

Mr Lownie—That is true.

Dr Matthai—Then as regards the question of soil, the primary point is that the soil is naturally poorer in India by reason of the fact that natural manures have been drained out of the country and devoted from agricultural uses?

Mr Lownie—Yes.

Dr Matthai—But there is nothing inherently impossible in the idea of remedying it?

Mr Lownie—We cannot alter the texture of the soil—the nature of the soil. In Java—we discussed this point yesterday—the soil I suppose is very largely volcanic.

Mr Ryan—It is the advantage of volcanic soil that gives maximum production.

Dr Matthai—That is a matter which is impossible to remedy.

Mr Lownie—We quite recognise that.

President—Does not the sucrose content to some extent depend upon the quality of the soil?

Mr Lownie—Yes. We might say that the Java soil is richer than the soil in this part of India but the percentage of sucrose in the cane is not connected with the fertility of the soil. The higher percentage of sucrose content might be due to the fact that in Java they are able to harvest each block at the time of its optimum sugar content. The percentage of fibre is about 12 because it is a tropical climate. It does not need naturally protection against cold and frost such as it needs in Northern India. In Northern India the fibre content is 15 per cent and it has gone up as high as 22 per cent in some of these canes.

Dr Matthai—Your lowest percentage is 15?

Mr Lownie—In Deshi cane it may be slightly lower, it may be 12. As the fibre goes up something else has got to suffer and therefore probably the sucrose content becomes less.

Dr Matthai—What about the question of temperature?

Mr Lownie—In Java they have no extreme heat as we have here which will burn up the cane. We have during March, April, May and during part of June very fierce heat in Northern India and if the rains are late a certain amount of cane dries up.

Dr Matthai—They have not got the cold weather we have here?

Mr Lownie—No. That is supposed to help ripening. On the other hand we are restricted to a growing period here of about 9 to 12 months and in Java because of the climate they can grow cane over a period of 18 months, I think.

Dr Matthai—The difference in the period of operation is reflected in the sucrose content, is it not?

Mr Lownie—In Northern India we cannot allow the cane to stand for more than 12 months because if it is not cut in 12 months it begins to dry up.

President—Is it not an advantage to have a shorter period? I mean your capital in that case is locked up for a shorter time.

Mr Lownie—It has the disadvantage too that it restricts the period during which the factory can run. We must stop crushing by the end

of April because we have got to carry cane a long distance, there is a good deal of dryage and the sugar begins to invert

President—In Java they can extend the working season because they can keep their cane?

Mr Lowrie—They begin by the middle of April and go on till some time in November

President—That is to say from the time the cane is beginning to ripen it can remain in the ground longer in Java than the cane out here?

Mr Lowrie—We believe that to be the case

Dr Matthai—As regards the question of land tenure the importance of that is that on account of fragmentation and sub-division here it is impossible to introduce mechanical appliances for efficient cultivation?

Mr Lowrie—Not only that it is impossible for any company, which wishes to establish a factory, to grow cane on a large scale because it is impossible for it to get the land to grow the cane as it would mean depriving the ryots of their livelihood

Dr Matthai—It prevents the factory from introducing agricultural improvements necessary for high class cultivation?

Mr Lowrie—Yes, to a certain extent

Dr Matthai—And also I suppose because sugarcane is grown in small holdings it becomes very difficult for the factory to get a continuous supply of cane in sufficient quantities

Mr Ryan—Within economic haulage distance

Dr Matthai—It would be difficult where the holdings are scattered to find the necessary amount of cane within the required time in a small enough area?

Mr Lowrie—Yes In Java we believe the factory is allotted so much land for a period of three years and that land is all within a radius of eight or ten miles and factories grow their own cane or let the land out to tenants who grow cane for them In India certain factories have land belonging to themselves and there are lands which they hold on long lease, but the area they have here is too small for cane cultivation on a large scale and while some factories get a certain amount of their own cane they buy the bulk of the cane from the ryots

Dr Matthai—The point I want to raise really is this one marked difference which we notice between India and other sugar-producing countries is the difference in the scale on which sugar is made

Mr Lowrie—You mean the size of the factory?

Dr Matthai—Yes The average size I understand is about 400 tons of cane a day here whereas in Java and Cuba probably the minimum is 1,000 tons a day

Mr Lowrie—There are small factories in Java and Cuba but they are in the minority The average in Java is about 1,000 tons per day, and in Cuba 2,000 tons

Dr Matthai—That to my mind is a fundamental disadvantage so far as India is concerned because it makes a lot of difference to your working costs and overheads when there is this difference in the scale on which sugar is made

Mr Lowrie—Yes, and that is a disadvantage which is very difficult to overcome

Dr Matthai—So far as Java is concerned the factory controls the cultivation, but in Cuba the factory doesn't because there the cultivation is very largely in the hands of independent growers, but the difference is that the grower is not a man who grows in small scattered holdings

Mr Lowrie—No, he grows on a very large scale and although he uses bullock ploughs he also uses tractor-drawn ploughs In other words he uses modern cultivation methods in Cuba Another thing in Cuba is that

factories have their own railways, they can bring the cane over a distance of 25 or 30 miles on their own track which we can't in this country

President—Now with the introduction of improved cane the output of the ryot will increase?

Mr Lowrie—Yes

President—Is it likely, do you think, that the factories would extend to any extent?

Mr Ryan—There is one factory in our group which is doubling its plant

Mr Lowrie—We have ourselves increased the capacity of practically every factory in the last ten years, there has been more cane offered to us. The increased production from the Coimbatore varieties has been the means of offering more cane

President—When the Sugar Committee sat this question of supply of cane was considered to constitute a very great disadvantage to the manufacture of sugar in India, do you think things have improved since then in the matter of supply of cane?

Mr Lowrie—Yes. For instance the Coimbatore varieties have been introduced and are being developed. Since the Sugar Committee sat more factories have been put up in an area in which it was perhaps at that time difficult to get all the cane needed and in that area cane cultivation has increased to cope with those factories

President—And also the output of cane per acre has increased?

Mr Lowrie—I can only say as regards the type of cane our Company is responsible for. I can't say that the ordinary ryot has changed his method to any large extent but where there are European planters they have gone in more for tractors for cultivation within the last ten years

President—As regards regularity of delivery has there been any improvement in that way? Is it possible now to arrange with the ryots, apart from the European planters, for delivery of their cane regularly from year to year to a particular factory?

Mr Lowrie—Yes. That can be done through contractors largely. A contractor contracts to deliver say, a lakh of maunds at a certain station within a certain period and he supplies it

President—In that respect you think there has been definite improvement during the last ten years?

Mr Lowrie—Yes, I would say there has been improvement

President—Of course it takes a considerable time to get the ordinary cultivator to take to any new idea such as sale of cane direct instead of making gur

Mr Lowrie—Yes. In that respect it is true there has been pronounced development towards the supply of cane to a factory as against making it into gur

President—As regards the extension of the working season, has it been possible to extend that by the introduction of new kinds of cane?

Mr Lowrie—In two of our factories we have found it possible to extend the season by starting earlier. That is as regards Samastipur and Champaran area. As regards the factories west of the Gondak,—that is Gorakhpore area—there has not been quite the same development of this early ripening cane, Co 211

Dr Matthai—Do the other types of Coimbatore cane ripen earlier than the indigenous canes?

Mr Lowrie—No. There is one type particularly, Co 214, which does contain at a given period so much more sucrose than the other Coimbatore varieties and than the *deshi* varieties. All the other Coimbatore varieties are probably a little superior in that respect to the *deshi* varieties, but there the great advantage to the grower is that he gets so much more cane

per acre and it is also believed that they withstand disease and unfavourable climatic conditions better than the *deshi* varieties

President—I suppose you would claim that this rather noticeable reduction in costs of Indian factories during the last ten years has been brought about to some extent by greater regularity of delivery of cane and by the extension of the working season?

Mr Lownie—Yes

President—That is to say, continuous working. There are two aspects of that, the one is that you may consider that by getting your cane regularly day by day freshly cut you get better extraction, and the other aspect is that by getting regular delivery your mill is fully employed the whole time instead of some days working short

Mr Lownie—That is so. I think the experience of most factories is that for the first three months of the season the amount of cane available is such that they have no stoppage but when they get to the middle of March when perhaps 12 annas of the cane is cut, there are stoppages because they can't get enough to keep them going fully

President—Has there been any improvement in that direction?

Mr Lownie—Conditions in the last ten years have changed in this respect, that there are more factories in the areas with which we are mostly concerned, namely Saran and Gorakhpore, and therefore there is more competition. I think the difficulty the Sugar Committee had in view at that time was that they were apprehensive of more factories being put down and they did not foresee the development in the quality of cane that might come about. They did not foresee that better varieties of cane would be introduced shortly. I think there was more apprehension than appreciation of the present difficulties in those days. For instance at that time, I am talking of 1919-20, in the Mahowari factory they were crushing more cane than they are crushing now. The reason for that is that at the time they could go further afield and get some cane from the railways whereas last year they had difficulty in getting enough railway cane. I am talking of our own factory but some of the other members of our Association, e.g., Saraya and Bhitni crushed more cane last year than they ever crushed before.

President—This difficulty which the Sugar Committee referred to, that is, competition of factories for the supply of cane, is that more real to day than it was ten years ago?

Mr Lownie—It is more acute because more factories have been put up within the last six years. We have Basti, Ghughli, Lakshmiganj, and Mahanagarj, these have been erected in a triangle between Bagaha and Gorakhpore on the west and Chupri on the east (map shown)

Dr. Mathur—The whole of it is west of the Gondak?

Mr Lownie—It is in that area where competition is acute

President—Has your Association taken any steps to regulate the supply of cane?

Mr Lownie—Yes. In 1921 the factories interested tried to establish a pool by which cane would be bought by one agency and distributed among the factories, that is cane other than what was grown round about the local factory. That fell through, nothing came of it. In 1925 it was revived. I presided over a meeting at Gorakhpore where we considered a scheme for the introduction of zones the factories were to group themselves roughly into three areas and we fixed zones within which one group was to get its cane, another zone for the second group and so on, but one factory would not agree because the owner was intending to double his capacity in the near future and he said that in that case he would not get enough cane. At that time we were instrumental in agreeing to pay a fair rate to the ryot and a common rate and that rate varied throughout the season, the rate going up as the value of the cane went up. We all paid the same rate to avoid unhealthy competition. That arrangement to

pay a common rate continued for two or three seasons. One season we did not come to any arrangement but in effect we kept to that. Then in 1929 there was another proposal to revive the pool under a common buying officer. But the expense of that was too great and it fell through but we still agreed to pay a reasonable rate to the ryot for the cane.

Dr. Matthai—What was the basis on which you proposed to arrange the pool?

Mr. Lowrie—We had all the stations within that area—about 113 stations I think—from which cane could be purchased and the cane officer was to buy at each station and send cane to the nearest group of factories.

Mr. Ryan—There was also the intention of avoiding uneconomic railway working.

President—Did you actually appoint a Cane Officer?

Mr. Lowrie—At the first meeting every one was in favour of the scheme. I was not Chairman then. Everything indicated that they were favourably disposed towards the scheme. When we got down to details and saw what it was going to cost, one group as a matter of fact backed out and said that they would have nothing to do with the scheme.

President—Was the cost very prohibitive?

Mr. Lowrie—It was going to involve the building of a bungalow at Gorakhpur. The Cane Officer would have to be retained throughout the year and in order that he should be above any irregularities, we would have to pay him a good salary. It was not so much on this score that this particular group voted against the scheme. They were in a favourable position as regards getting supplies of cane in their own vicinity and they thought they could get cane for their factories without such a cane buying officer. That area by the way one might say is invaded by the other groups.

Dr. Matthai—If as regards licensing legislative difficulties stand in your way and as regards voluntary zone arrangement joint action is difficult to bring about, then what is going to be the solution?

Mr. Lowrie—We have not been able to find a solution so far. We have had a number of schemes put up, mostly based on the zone buying system.

President—Have you got to be unanimous?

Mr. Lowrie—Yes, otherwise one simply stops in and buys the cane at his price.

President—You are not entitled under your constitution to take action against anyone?

Mr. Lowrie—No. There is no monetary deposit. We cannot fine any member buying. There are no rules to that effect. It is merely goodwill.

Dr. Matthai—If you fine him, he leaves the Association?

Mr. Lowrie—Yes. He would continue to buy against the other factories.

Mr. Ryan—As a matter of fact when we submitted this memorandum we were in high hopes that an arrangement would be come to for the coming season. One factory has disagreed to any proposals for control and the bottom falls completely out of it. It is a more recent factory. It has come to an area which is already insufficiently provided with cane and has now declined to come into any working arrangement with the other factories. When the question was put to the others as to whether they would continue the arrangement with this one factory out of it naturally the others realised that it would not be safe, and declined to come into any arrangement, so the scheme that we had in mind fell through.

Dr. Matthai—When once we declare the Sugar industry in this country a protected industry, isn't there a danger of this kind of competition getting worse?

Mr. Lowrie—There is no one who would pioneer. There are other areas in the United Provinces where cane is grown and could be developed—

probably the area is quite as suitable as the Gorakhpur area—but no one has tried to develop that part of the country.

President—I suppose in the event of the industry being protected probably some of the existing Companies such as Begg Sutherlands would develop some of the new areas.

Mr. Lownie—Yes, but we have not thought about it seriously, because we have another factory in view in Bihar which is away from any real competitive area at present. We have got everything ready for it, but we haven't finally decided whether we should go on with it or not. For that reason we have not considered western United Provinces, but we did some ten years ago seriously consider a factory in the Muttra area. I think the trouble there was that the owner of the land wanted far too much and there was difficulty about water.

President—If as the result of protection the number of factories in this small area is doubled or trebled it would be as bad as before?

Mr. Lownie—Yes, there would not be enough cane.

President—People would be expected to do a little pioneer work and open out new areas?

Mr. Lownie—Yes.

Dr. Matthal—A new factory would mean a capital expenditure of somewhere about Rs. 15 lakhs?

Mr. Lownie—Rs. 15 to 20 lakhs.

Dr. Matthal—A man who proposes to invest Rs. 15 to Rs. 20 lakhs in a business is likely to make sure, before he starts, of the necessary condition of an adequate supply of cane. The only sort of man who is likely to cut into an existing area is the small man. But the small man who is going to offer a higher price in the existing area in order to get what he wants in the way of supply of cane increase his sugarcane cost and working on a small scale his overheads go up and there is really very little chance for a man of that kind. Supposing we are unable to provide any legislative remedy against these difficulties and supposing a definite All-India arrangement is also out of the question, can we depend upon ordinary economic forces to set the situation right?

Mr. Lownie—Yes eventually, but some are prepared to risk considerable losses in the hope that the other man will drop out.

President—There is a big risk.

Mr. Lownie—Yes, because there is not enough cane in the area. When he sees that the other factories are operating and making something out of it, he may not consider very seriously the supply of cane. He knows that there is a lot of cane. He will put the factory down under the impression that he will get the cane. I cannot answer for one of the newly erected factories. The latest one is Basti. They had a cane supply fairly well arranged because where Basti has erected a factory other factories used to buy and transport the cane 40 to 50 miles from that area, so that Basti one might say came into a fairly well developed area.

President—Would it be worth while for the Sugar Producers' Association to undertake a certain amount of propaganda in this respect ascertaining from the various Directors of Industries possibilities of development so that any new Company promoter might get into touch with the Association and ascertain their views? I can understand the man absolutely refusing to be turned from his intention of putting down a factory somewhere near Gorakhpur if he was not given some alternative. Couldn't you say to him "We have been in this trade quite a long time and it is going to be bad for all of us if you come into the area where there are so many factories. On the other hand we have information from the Directors of Agriculture and Industries that in this or that tract land is available where you can go and erect a factory."

Mr. Lownie—We can do propaganda. Sometimes these factory sites are arranged before we get any information.

President—In the case of a big factory, you would certainly come to know of it

Mr Lowrie—They would probably join the Association after they had established themselves

President—Would that happen with a really very big factory? Wouldn't you know about it?

Mr Lowrie—We might, but a number of these factories which were established two or three years ago have only recently joined the Association

Dr Matthai—I suppose if the worst came to the worst immediately after the protection is granted for a period of ten years you might have a number of new factories started in areas where they had no business to start and then the whole industry will pass through a period of unpleasant probation at the end of which only the stronger ones might emerge. If that happened, it would mean that the period of protection would be correspondingly prolonged and the burden on the country would be greater

Mr Lowrie—I think it would be for the Government or for the Director of Industries to advise the Provincial Government to devise some means to prevent any other factories going up in any area where there are already too many. As you said a few minutes ago, legislation would be difficult

President—When you establish a factory, how do you acquire the land? Is it by private negotiation?

Mr Lowrie—In the case of one I have told you about a few minutes ago Begg Sutherland & Co., have been able to arrange through a European planter who had the land which descended to him or was taken over or bought by his predecessors, but all our factories have been built on land which has been in the hands of European planters for many many years. It is difficult for a company to come along, and buy up land which is cultivated by a raiyat for his livelihood. He grows his food crops on it and I don't think it would be possible for a Company or Corporation to acquire enough land

President—Doesn't that limit the possibility of new factories to some extent?

Mr Lowrie—It does, but it is more a disability for cane growing

Mr Ryan—We don't only look at it from the point of view of putting up new factories. We have recently had figures furnished to us for land which entirely put that sort of idea out of the question. Rs 9 000 an acre was asked for the land

Mr Lowrie—It was not for a sugar factory

Mr Ryan—It was for a purpose where one would expect the land to be cheaper

President—In the sugar growing tracts where you have got a large number of factories, I should have thought that unless you are very fortunate you would have found difficulty in acquiring a new site for a factory except at a very high rate

Mr Lowrie—Basti is new and occupies a site of 14 or 15 acres, probably a little more. How they acquired that site, I don't know. I should imagine that they paid the raiyat (who owned it or who held a perpetual lease of it) a large sum. For a factory it is not so difficult, the area required being small—10 acres. It depends on the size of the ground you want and you might get it by paying a fair price. Our reference is to a large area of land—3,000 acres. It would not be impossible to acquire, but we have to pay a price

President—I am not very conversant with the land tenure of the United Provinces, but it occurs to me before land which is let out to a raiyat is turned over for industrial purposes some sort of Government sanction is necessary

Mr Lowrie—No, I don't think so

President—The raiyat has the right of transfer?

Mr Lownie—Yes. The land must belong to a zamindar. In the United Provinces there is not the same difficulty as there is in Bengal and Bihar in the matter obtaining the landlord's sanction to the transfer of his occupancy rights or cultivation rights. In the United Province I believe it is less difficult to transfer land.

Dr Matthai—When you speak of the Director of Agriculture advising a new factory against starting in any existing areas, I suppose you are simply referring to the moral persuasion that might be exercised by the Director of Agriculture?

Mr Lownie—Unless there is legislation he could not do anything. The Directors of Agriculture and Industries might advise them that it would be a bad policy to erect a factory where there is going to be fierce competition with neighbours for cane.

Dr Matthai—It seems to us a rather important point on which later on if you have any considered opinion as regards definite proposals, it would be rather useful if you would let us have them.

Mr Lownie—We can discuss it at a meeting and of course we can call a meeting but I think that none of the members would put up a new factory in an already crowded area.

Mr Ryan—Are you referring to propaganda by the Association?

Dr Matthai—It is for you to suggest. The problem with which we are concerned is this: that once the sugar industry in this country, as a result of protection, is put on a definitely paying basis, it looks to me that the danger of wasteful competition in sugarcane areas is likely to be greater.

Mr Lownie—That is so.

Dr Matthai—If that happens, either the policy of protection fails or the period of protection is unnecessarily prolonged. If some kind of remedy could be suggested as regards that, it would be most useful. When the Sugar Committee considered this problem in 1920 they were not up against the question of tariff.

Mr Lownie—No.

Dr Matthai—Here we are going to consider the question of protection by means of tariffs and therefore we may be offering a stimulus for precisely this kind of thing.

Mr Lownie—Yes. I think we mentioned licenses, but the suggestion regarding licenses was put forward before the Sugar Committee. They don't have a direct bearing on the point which you are considering.

Mr Ryan—Such a function would be entirely within our declared objects and since you have been speaking about it, it has struck me that it would be a useful function. Obviously we could only act in an advisory capacity and we would have to obtain, collect and compile the information. That is what you mean.

Dr Matthai—Yes, as to the available supplies of cane in particular areas.

Mr Lownie—We could do that.

Mr Ryan—It would be an expensive function. I am the Honorary Secretary of this Association. Our funds are not so enormous that we can devote unlimited amounts to schemes of this sort, but it is possible that something might be devised.

President—How are your funds provided?

Mr Ryan—Each member pays a subscription of Rs 75 per annum.

President—If the sugar producers are certain that they are going to get protection on quite a reasonable scale for a longer period, possibly they might be inclined to invest rather bigger funds.

Mr Ryan—It opens out to me a picture that is rather attractive. Obviously we would require sinews of war.

President—You would. On the other hand if you were getting a price that has been suggested, viz., Rs 10 per maund for a period of say 15 years,

the factories would be in a position to put up finance for that organisation on a larger scale

Mr Ryan—I am attracted by the suggestion

Dr Matthai—If you backed up the Directors of Agriculture by your own propaganda, then things might be a good deal better

Mr Ryan—There is no reason why we should not

Mr Lowrie—We would be only too glad to work with anybody who could prevent any one coming into an area already crowded

President—Let us consider the question of price of cane. On the assumption that protection is granted, it would be necessary for factories to pay a reasonable price

Mr Lowrie—Yes, to pass on some of the advantages of protection

President—It might be considered reasonable to pass some of the advantage of protection on to the cultivator but the price of cane would have to be in any case fixed at such a pitch that on the one hand it would encourage the cultivator to deliver at the factory regular supplies of cane and on the other hand it must be sufficiently high to give the cultivator a reasonable return to make it worth his while to sell cane direct instead of making *gur*

Mr Lowrie—Yes

President—The third point, which has really some reference to the first, is that it must have some relation to the price which he can get for *gur*

Mr Lowrie—Yes I remember the time when we got our cane at $2\frac{1}{2}$ to $3\frac{1}{2}$ annas a maund. That was about 20 years ago. When we started our Bihar factories we could not get anything like full supplies and cane had to be developed. But the price of cane is now about three times that

President—The development of communications might account for that to some extent

Mr Lowrie—The cost of livelihood has not gone up to the same extent, and I don't think that the raiyat—considering the development in cane cultivation there has been in the past ten years—would have grown cane or developed cane to such an extent as he has done if he had not been getting a good price for it. But the Association recognises that if they get more for their sugar they should give a reasonable rate to the raiyat for the cane, so that he may reap some of the benefit of protection

President—On the other hand the price of cane to the cultivator should not, on theoretical grounds be so high as to induce him to extend the cultivation to land which is really not suitable for cane cultivation

Mr Lowrie—In other words, there would be a glut of cane and thereby the price would be reduced?

President—I was not thinking of that. What I mean is this. It is uneconomical to produce cane at high cost on land which is not suitable for cane because sooner or later that land would have to go out of cultivation. For example, when your new canes are developed to such an extent as to supply the factories with all the cane they want—possibly from the same acreage—any inferior land which had been put under cane would in time again fall out of cultivation

Mr Lowrie—It would not fall out of cultivation perhaps as long as he was getting a paying price for the cane. But on the other hand if he produces too much cane and there is a glut of cane and the manufacturers take advantage of that, then that land would go out of cultivation

President—Assuming that Rs 10 was the price per maund of sugar at Calcutta, what would induce the cultivator to deliver cane in sufficient quantities at the mills?

Mr Lowrie—He is delivering now. I am talking of railway supplies. He is delivering at the beginning of the season at 5 annas a maund and probably at the end of the season at about 8 annas a maund,—it has at the end of a season gone up to 14 annas in some stations

President—Five to eight annas a maund?

Mr Lownie —Yes

President —That is an average of 6 annas

Dr Matthai —Actually the average would be nearer 7 annas

Mr Lownie —Yes It would not be a fairly equal supply from month to month In March when the rate is 8 annas probably the supply is reduced, so that you cannot take the mean average For the season the average would probably be $6\frac{1}{2}$ to $6\frac{1}{2}$ annas a maund

Mr Ryan —But the low rate would be applicable to the bulk of the supplies

Mr Lownie —Yes

President —This price of $6\frac{1}{2}$ annas—that is delivered at the railway station?

Mr Lownie —Yes

President —You will have to get it into the mill

Mr Ryan —It will cost an anna a maund for handling I think

Mr Lownie —It will depend on the contractor Last year they paid the contractor at the rate of one anna a maund for arranging the supply

Dr Matthai —That is to the contractor who arranges for the supply at the railway station?

Mr Lownie —Yes That is a high rate A more reasonable rate would be 9 pies

Mr Ryan —We started with Rs 5 per 100 maunds

Mr Lownie —That is a little over 9 pies per maund

Mr Ryan —We found that some people raised the rate to Rs 6 4 0 and others had to agree to this

Mr Lownie —There is a minimum railway freight of half an anna a maund based on the capacity of the wagon

Dr Matthai —Taking 6 5 annas as the average price which the cultivator gets at the railway station, how much of that is transport? Does he bring it in his own cart?

Mr Lownie —Yes, or he may hire a cart to bring it in

Dr Matthai —Can we presume that in the great majority of cases the man would use his own cart and bullocks?

Mr Lownie —Yes, but in some areas there are professional carters

President —For cartage the grower does not charge anything?

Mr Lownie —No

President —The cost at the factory would be $7\frac{1}{2}$ annas?

Mr Lownie —Yes, rather more

President —From the point of view of the factory, the cost of the raw material would come to $7\frac{1}{2}$ annas even now

Mr Lownie —About that

President —If we fixed the price at Rs 10 a maund

Mr Lownie —Rs 10 at Calcutta might mean Rs 11 6 0 up here and Rs 10 8 0 at the factory I am working on the basis of Cawnpore being the centre

Dr Matthai —You are taking the average freight I suppose?

Mr Lownie —Yes The freight from Calcutta to Cawnpore is Rs 1-6 0 That makes it Rs 11 6 0 for Java sugar I am now taking the Cawnpore rate of Indian made white sugar which is perhaps Rs 11 2 0 It is less than the price of Java sugar because we do not get as much as Java We have to deduct from that the freight from Bihar factories to Cawnpore of 8 annas to 10 annas We might get Rs 10-8 0 for the first sugar and 8 annas less for the second sugar So, we might get an average of Rs 10-4 0

President —Does that apply to most of the factories?

Mr Lowrie—Yes. They all produce the same quality of sugar and the freight is much the same.

President—Supposing we took 8 annas a maund for your cane delivered at the factory?

Mr Lowrie—With an extraction of 9 per cent we require 11 maunds and at 8 annas a maund it comes to Rs 5 8 0 for the cane.

President—That leaves you Rs 4 14 0.

Mr Lowrie—Yes, so that the cane grower is getting his full share at 8 annas a maund, but he does not get the full 8 annas because that is the cost of the cane delivered at the factory.

Dr Matthai—That would almost exactly correspond to the Sugar Committee's sliding scale?

Mr Lowrie—I can tell you about the scale at two of our factories. We pay a minimum of 5½ annas a maund for cane. If the sugar price is Rs 10 we pay 5½ annas and if the sugar price is Rs 11 it is still 5½ annas. If the sugar price is Rs 12, then the cane price is 6 annas, and if the former is Rs 13, the latter becomes 6½ annas and so on. It is half an anna more for every rupee increase in the price of sugar. That is the system we have adopted in the case of two factories.

Dr Matthai—Supposing we decide to stabilise the price at Rs 10 a maund at the port of entry and it is suggested that the price of cane should be fixed as far as possible at a figure which will not merely give the grower a reasonable profit but will make it worth while for him to deliver his cane to a sugar factory rather than to a gur factory, do you think that a price of 8 annas, speaking of the conditions here, would be satisfactory?

Mr Lowrie—Eight annas to the grower or 8 annas delivered at the factory?

Dr Matthai—Giving the grower whatever he can get out of it.

Mr Lowrie—That means just over 8 annas.

President—That means giving half an anna more to the contractor?

Mr Lowrie—Yes, it would mean that.

Dr Matthai—Practically all your supplies are got through contractors outside Bihar?

Mr Lowrie—In Champaran and Samastipur we deal not entirely but to a large extent with European growers. They might be regarded as contractors. They have entered into an agreement with us for a period of years in which they have to grow a fixed area of cane and deliver their cane at the railway station and the company takes delivery there.

Dr Matthai—May we take it that as far as the bulk of the sugarcane supplies are concerned, the typical arrangement is a contractor?

Mr Lowrie—Yes.

Dr Matthai—If that is so and we suggest that the price of sugarcane should be raised if possible from 7 annas to 8 annas at the factory, does the benefit of that go to the middleman or to the grower?

Mr Ryan—I believe we can keep the middleman out.

Mr Lowrie—Last year we had an arrangement to buy at a common rate. Every one was on his honour to pay that rate but certain factories complained that other factories were paying more at the same station. When the latter were asked for an explanation they told us that their contractor was ordered to pay the common rate and that if the contractor was paying more, he was paying out of his commission. It is very difficult to determine or control the amount that the contractor will pay to the actual supplier.

Dr Matthai—If you are anxious to get your supplies of cane in regular and sufficient quantities, the man on whom you have to depend is the contractor.

Mr Lowrie—Yes, but we should like to be able to deal with the raiyat direct. The contractor is a middleman.

Dr Matthai—You are interested in seeing that the whole thing is worth while for the contractor?

Mr Lowrie—We are interested in seeing that the whole thing is worth while for the grower. I may say that in the case of some factories we (Begg Sutherland & Co) never employed contractors until we had to compete with others. We had our weigh-clerks at the railway stations who simply weighed the canes and took delivery and the growers who brought the cane were paid by our cashier, and there was no middleman. Only when we could not get the cane, we had to employ contractors.

President—Supposing your Association had agreed to have a cane officer would it be necessary to employ a contractor?

Mr Lowrie—I should say so because the officer has such a large area to cover.

Dr Matthai—In that case it would be the cane officer who would employ the contractors.

Mr Lowrie—Yes. He would try to control the rate paid to the raryat. There is no guarantee that the contractor would not retain from what he gets from the factory more than he is entitled to.

Dr Matthai—The payment is entirely in the hands of the contractor?

Mr Lowrie—Yes.

President—Could anything be done to remedy that by publicity?

Mr Lowrie—We tried last year in the case of Samastipur factory. To ensure that the grower got the proper price, we put up a notice in vernacular that he was to demand to see what the cane weighed if he wanted to and we told him what the rate was. It could be done in other places too. But fact is that many ryots are illiterate.

President—That would help them?

Mr Lowrie—Yes.

President—I found in the Central Provinces and Berar that the fact that the cotton cultivators knew the Bombay rates, although a lot of them were illiterate, had a great effect and helped them in securing the proper price.

Mr Lowrie—It would be a good thing. We adopted it because there were reports that the man in charge of the weigh-bridge was cutting weights and not giving a receipt for the correct weight. Since the weigh bridge had the English and vernacular weight on it, as some of them were literate, they soon got to know roughly the amount registered. They know how much is in a cart.

President—Supposing Government made any protection which was given conditional first of all on the factory paying to the cultivator according to some fixed scale and secondly on the factory fixing at a conspicuous place in the factory a notice, and in the legislation there was a clause under which the Governor General in Council would insist on each factory submitting returns to the local Director of Agriculture and among these returns there was a statement that this notice was placed in a conspicuous place showing that such and such rate was being paid to the cultivator, would there be any particular objection to that?

Mr Lowrie—No.

President—That would do something to ensure that the ryot was getting what he ought to get. In the event of protection being granted some sort of steps should be taken to see that the protection filtered down to the ryot.

Mr Lowrie—As an Association we are in favour of it.

Dr Matthai—That of course implies that any kind of sliding scale on which payment is made for cane must be a sliding scale the working of which would be intelligible to the illiterate grower. Take the Bihar scale.

Mr Lowrie—That only operates as far as the European grower is concerned.

Dr. Matthai—Speaking tentatively a flat rate does not look to me sound. If there was a boom in sugar and you were getting Rs. 20 in Calcutta, obviously some share of that must go to the grower.

Mr. Lowrie—Yes.

Dr. Matthai—Now, the sliding scale which the Sugar Committee suggested in 1920 was a sliding scale which depended for its working not merely on the price of sugar but on the extraction in the factory which is very difficult for the ordinary grower to understand.

Mr. Lowrie—Quite so, but if it is an inefficient factory it is rather an inducement to it to become more inefficient, or remain inefficient?

President—There would be endless room for disputes.

Mr. Lowrie—It would be rather difficult to ascertain what the real percentage of extraction was within a few points.

President—Whereas as regards your Bihar sliding scale it seems to me that the general framework of that would be more easily understood because the only thing you need understand there is the price of sugar and the scale works automatically on that basis. Therefore supposing we suggested some kind of scale corresponding to the Bihar scale don't you think the ordinary grower would be able to base his demand on that scale more easily?

Mr. Ryan—We have given a hint of our appreciation of the fact in our memorandum. We say "One thing is certain, and that is, with stabilised protection to the industry the growers' section of the industry will naturally find an enormous incentive for co-operation among themselves so as to take advantage to the full of the protection so afforded." We appreciate that the grower must be benefitted by this.

President—You are quite against the idea of a flat rate if we are considering protection for a fairly long period?

Mr. Lowrie—I think a flat rate throughout the whole period is not advisable.

Dr. Matthai—If 8 annas was fixed as the rate at which sugarcane would be landed at the factory for 15 years, it would be essentially an unsound principle, would it not?

Mr. Lowrie—That might adversely affect us also.

Dr. Matthai—Is there any other kind of factor with reference to which you can frame a sliding scale?

Mr. Lowrie—We tried that in Samastipur when we built that factory. We adopted payment for cane on the sucrose content and it involved many thousands of analyses and meant at least 50 chemists to work it and we gave it up. That is the system which is in force in South Africa.

President—It has only been recently introduced in South Africa?

Mr. Lowrie—It was adopted four years ago. They probably sample one wagon. Whether they sample every cart or every wagon or every third or fourth cart or wagon I do not know. If we were to sample 300 or 400 carts or 80 or 90 wagons that came into the factory you will see what work it would involve and we gave it up. It is impossible, so we came to a compromise. We knew what we were getting and they knew what they were getting for their cane and we gave them an increase in this sliding scale on the price of sugar.

Dr. Matthai—You consider that the fair price for sugarcane must in the first instance be based on a sliding scale and in the second instance the sliding scale must be framed solely with reference to the price of sugar?

Mr. Lowrie—Yes.

Dr. Matthai—That is the only workable way in which you can do it?

Mr. Lowrie—Yes.

President—What about competition of gur? Supposing your scale was as suggested, viz., 1 anna per maund cane plus half the value of the sugar.

produced per maund of cane at Rs 10 per maund sugar that would be 8 annas delivered at factory

Dr Matthai—Does your present sliding scale, apply to payment at the factory or at the railway station?

Mr Lownie—At the railway station or if he is within cartable distance of the factory he carts it to the factory

Dr Matthai—Let us assume Rs 10 as the price of sugar in Calcutta

Mr Lownie—On our present sliding scale Rs 10 in Calcutta would mean Rs 10 8 0 at the Champaran factory They would only get $5\frac{1}{2}$ annas plus one anna, that is $6\frac{1}{2}$ annas

Dr Matthai—That means landed at the factory roughly 8 annas?

Mr Lownie—Yes Of course I don't know if we are to adopt a common rate for all the areas

President—I don't think you can lay down anything fixed, that is why I was suggesting, that Government might require returns of the price of the sugar made

Mr Lownie—These Champaran cane growers who supply the Champaran factories get other premia They get one which is a compromise on the sugar content,—I am talking of the Champaran Sugar Company and the European planters—they get half an anna per maund because they compromised not to have the cane analysed So that they are getting 6 annas There is another premium, one for delivering Coimbatore cane of a particular variety, that premium is about 1 anna six pies per maund so that if the basic rate is going to benefit the grower it is also going to hit the factory hard

President—I don't think the suggestion is that the basic rate should be absolutely definite The suggestion really is this that we should in our report indicate approximately what rate we think would on the average meet the requirements of the grower and what rate the companies could afford to pay and then the companies should send in returns of prices If Government on receipt of a report from the Director of Agriculture or otherwise was satisfied that the grower was not receiving a fair price, Government may then take such action as it thinks fit That would be the general line as it appeals to me at any rate

Mr Lownie—If the grower was not getting enough for his cane the duty would be reduced?

President—Not necessarily

Mr Lownie—It would be difficult to establish a basic rate because as I said for delivering a certain type of cane there is a premium This would be over and above the basic rate The basic rate would have to be based on what they call *deshi* variety of cane

President—The Director of Agriculture of the province concerned would decide whether a company was paying a fair rate and in the event of an adverse report from him on the subject showing that taking it as a whole the companies were fleecing the cultivator Government might then take action

Mr Lownie—It would be better if Government have power to make the factory pay more to bring the price of cane up to what they consider reasonable

President—How can they do that?

Dr Matthai—As far as the premium is concerned I understand these contracts are about to expire, aren't they?

Mr Lownie—In the case of Champaran they have just been renewed, Samastipur agreements will run up to 1984

Dr Matthai—If we laid down a sliding scale for general guidance then I presume when these contracts are renewed or fresh contracts made they would be based on the sliding scale If it is found that in a large number of cases sugar factories are not paying the grower what is a fair price then there

must be some executive power vested in the Governor General in Council to reduce the amount of protection needed by the industry

Mr. Lowrie — Is the industry as a whole going to be penalized for the fault of one factory?

Dr. Matthan — It may be worked in this way. The Director of Agriculture receives returns and finds that certain factories are paying insufficiently. In that case he will draw the attention of the company to that matter. I don't think it would ever be considered necessary to penalize the industry as a whole if there were one or two defaulters. But if, taking the industry as a whole, the Director of Agriculture was satisfied that they were paying insufficiently, then he would be competent to report and action would be taken on it. I should imagine the first step the Director of Agriculture would take is that he would write to the Secretary of the Sugar Producers' Association and draw his attention to the matter and would probably discuss it with him.

Mr. Lowrie — At present the Association does not control the rate at which an individual member buys.

Dr. Matthan — But it would be in a position to bring some pressure to bear on the member.

Mr. Ryan — Wouldn't there be an economic remedy for that, the purchaser who pays less for his cane to the mill than what others are paying would not get his cane?

Dr. Matthan — If you try to reduce competition amongst growers for the sake of the factories that is a good thing for the factories but then there is a corresponding obligation on the factories.

Mr. Lowrie — That undue competition has resulted in factories paying 1½ annas a maund when the price of sugar was Rs. 12. On the Champaran and Samastipur side the growers have been supplying these companies for over 20 years in the one case and in the other 10 years and although there the basic rate is 5½ annas they had cartage in one case and they had premium of different kinds and the cost of cane to these factories is something like 7½ annas. So that as I said, what is established in one area may not apply to all the areas. But if the rate could be such that no factory had to pay more than 8 annas landed at the factory and they were getting Rs. 10 8 0 for their sugar, it would be quite fair I think.

President — As a general guide?

Mr. Lowrie — Yes.

President — But you would rather welcome the idea of a factory sending in returns?

Mr. Lowrie — Yes.

President — Now about competition from gur. I suppose we may take the price of gur as roughly Rs. 5 per maund at, say, Gorakhpore?

Mr. Lowrie — That is a high rate, but we paid a few pice under Rs. 5 last year on the average to bring gur up to Cawnpore.

President — Looking at the rates for the last three years Rs. 5 would be about the average.

Mr. Lowrie — That is probably on the high side.

President — What would you put it at, at Gorakhpur?

Mr. Lowrie — At Gorakhpur for the past three years I should say Rs. 4 2.

President — At Gorakhpur?

Mr. Lowrie — Gorakhpur is not a gur centre. So let us say for the Gorakhpur area.

President — What sort of percentage would they get?

Mr. Lowrie — They require 11 maunds of cane to a maund of gur.

President — Do they get only 9 per cent?

Mr. Lowrie — Yes.

President — The same amount of gur as sugar?

Mr Lowrie —Only they put into *gur* what we cannot put into our sugar. Mr Clarke is more in direct touch with them and he will be able to give you the exact figure. We had it from a few persons who probably got this information by enquiring, and observation.

Dr. Matthai —If it is 10 per cent, he gets As 6½. That would again correspond to As 8 at the factory.

Mr Lowrie —Yes.

President —If it is 11 per cent, he will get exactly As 6.

Mr Lowrie —Yes.

President —That would be sufficient to ensure the delivery of the cane at the factory.

Mr Lowrie —If he was getting As 6 for making *gur* or even if he was getting a little below As 6, he would probably deliver it at the railway station, because there is no trouble, he doesn't have to hire a mill or melting pans and he doesn't have to take the trouble of making it.

President —To what areas in the United Provinces does this As 6 apply?

Mr Lowrie —I am not talking of Meerut. I am talking of Ramkola, Mauwa and Chauri Chauri. These are the larger markets in the Gorakhpur area.

President —What parts of the United Provinces?

Mr Lowrie —All are in Gorakhpur.

President —What about Rohilkhand?

Mr Lowrie —I have never known any factory buying *gur* for refining purposes from the Rohilkhand area.

President —Because of the communications?

Mr Lowrie —It is more an eating *gur* made up there.

President —That would cost more?

Mr Lowrie —Yes. It would not compete with Gorakhpur *gur*. It would compete with Meerut or Muttra *gur* at an economic rate.

President —What about Rohilkhand?

Mr Lowrie —I don't know. The Director of Agriculture would give you very reliable information about that.

President —We were told in the Government's reply to our questionnaire that the khandais were paying As 7 a maund for cane. If they were paying As 7 a maund for cane, the price of *gur* can't be high.

Mr Lowrie —They are getting a good price for eating *gur*. You are talking of a man who is going to make it into sugar?

President —Yes.

Mr Lowrie —He is probably getting a good price, probably Rs 12-8. We can't get that price. The bulk of our refined (*gur*) sugar is sold for Rs 10, or less at present.

President —At present at any rate the Sugar industry in Rohilkhand depends largely on getting a fairly high price for deshi sugar?

Mr Lowrie —Yes, but that price is hardly an economic price. It is very often a sentimental price.

President —Speaking generally about eating *gur* as opposed to *gur* for refining purposes which they are doing in Gorakhpur, doesn't it appear probable that with the increase in output on account of the improved varieties of cane the price of eating *gur* in the course of ten years is bound to come down steadily?

Mr Lowrie —With more *gur* produced, the law of supply and demand will operate.

President —If they get 50 per cent increase on account of Coimbatore canes they have to reduce their price for their eating *gur* to get rid of it. It is not a thing which keeps.

Mr Lowrie —No.

President—So the probabilities are that in the course of the next ten years we shall see a considerably lower price for *gur* both in the Meerut area and Rohilkhand area

Mr Lowrie—That is so, as cane supplies increase

President—Unless a considerable hardship is to be caused to the growers in that area their surplus cane will have to be utilised in some other way

Mr Lowrie—There will be more white sugar factories I know lots of small mills are bought for making *deshi* sugar at Kheri

President—What do you call a small mill?

Mr Lowrie—A mill crushing up to 80 maunds of cane an hour

Dr Mutthai—Mr Clarke gives us the capital cost of a factory in Kheri that crushes about 400 maunds of cane in a day

Mr Ryan—Yes I have had enquiries for small plants dealing with 350 maunds a day

President—Do you think in the transitional period when owing to increased production the price of *gur* in these other areas must tend to go down, that the *khandsari* will perform a useful function?

Mr Lowrie—He will

President—In taking over the surplus? So far as I can see no factory would run the risk of starting in Meerut area while the present price continues

Mr Lowrie—I think not

President—As the price of *gur* declined it might well be worth the while of a small man in some particular area. He knows that there is a good deal of overproduction in that area and he will put down a small plant

Mr Lowrie—Yes

President—In that way a small plant will be an addition to the big factory

Mr Lowrie—Yes

President—In looking well ahead it would be worth while to take into account the position of a *khandsari* in framing our proposals for protection

Mr Ryan—I should think it is an important factor

Mr Lowrie—As the price of *gur* goes up, the price of *deshi* sugar will go up too

President—Yes The Sugar Committee adopted the opposite point of view and they considered that there was no future at all for the small manufacturer.

Mr Lowrie—Our experience tells us to the contrary and more and more enquiries for small mills are made. They are coming from areas which are served by the Sarda Canal

President—Does that apply in the Gorakhpur area?

Mr Lowrie—Yes. There are enquiries from people who crush in competition with the larger mills

President—It is not unreasonable to conclude that the conditions in India are peculiar as compared with other countries. Here a small man has really got a chance. There are difficulties in obtaining very large supplies of sugarcane to ensure the big factory to crush continuously for a long period. There are difficulties of communications and there is the capital cost of a large factory. All these matters will have to be considered when we consider the future of the small manufacturer. For instance in Cuba there is no difficulty about establishing a large factory with a large output

Mr Lowrie—I have not been to Cuba. I should think nobody makes sugar except the big factories

Dr. Matthai—In Java they make some *gur*

Mr. Lowrie—Even big factories are turning out *gur* which now comes to India on a fairly large scale

Dr. Matthai—The price of khandsari sugar actually realised in March 1929 is given as Rs. 11.04 a maund. That is I suppose when the price in Calcutta was somewhere about Rs. 9

Mr. Lowrie—Between Rs. 9 and Rs. 9.8. It was Rs. 9 until the new Java came in in May 1929

Dr. Matthai—If you take Rs. 9.4, Rs. 1.4 would be the railway freight

Mr. Lowrie—Rather more than that

Dr. Matthai—Rs. 1.6?

Mr. Lowrie—Yes, and there is an octroi duty of As. 2

Dr. Matthai—That is altogether Rs. 1.8?

Mr. Lowrie—Yes

Dr. Matthai—It comes to Rs. 10.8. He is getting Rs. 12. Does it mean that the sentimental preference amounts to Rs. 1.8?

Mr. Lowrie—Sometimes more. There again it is a question of supply and demand

Mr. Ryan—It would be interesting to know what would be the price obtained at Diwali time

Dr. Matthai—He doesn't give it

Mr. Ryan—That is the time when khandsari sugar is much in demand

Mr. Lowrie—We do not know very much about this matter and Mr. Clarke will be able to give much more useful information

President—Mr. Srivastava has some reference to this intermediate factory and he seems to be strongly in favour of small sugar factories of a modern type crushing 800 maunds of cane per day

Mr. Lowrie—As against the average of 400 tons of cane for India for the large ones. He is talking of 800 maunds of cane a day. That is probably crushed by a mill made by Messrs. Massey and Company, Madras. Mr. Srivastava had that in mind

President—That is something intermediate between the khandsari and a big factory. A small factory of that sort will surely have none of the advantages of a big factory and very few advantages of a small factory. You would not get your cost of supervision and general overhead charges reduced, because you are not turning out a large quantity. He says that practically the same staff will be required. He says

“The process and general method of working is the same in small factories as in big ones. For efficient control, therefore, the technical staff required is the same in both cases.”

After all the technical staff is the most expensive

Mr. Lowrie—There are factories and factories. For ourselves we import all our superior technical staff, a European Manager who may be an Engineer or a Chemist. We have a European Engineer or two, and a European Sugar boiler. Our Chemists are Indian. Mr. Srivastava is not working on that basis for a small factory. Then there are Indian owned and Indian managed factories, e.g., Basti and Ghughli, etc., etc.

President—Those are very big ones

Mr. Lowrie—Yes

President—A small factory would probably have to employ the same staff as the big factory and therefore the cost would be higher

Mr. Lowrie—Not necessarily, and he may be satisfied with less efficient results according to his expenditure

President—He won't be able to compete with the big factories

Mr. Ryan—That is a point

Mr Lowrie—He is producing sugar in a way which doesn't compete with the sugar which the big factories are producing.

President—I should say the big factories are able to reduce their cost because of their high efficiency.

Mr Lowrie—Yes and a large output.

President—As compared with the small factories their overhead charges are considerably higher. Take a small khandasari factory. They have the advantage of lower overhead charges and being able to get continuous supply of cane because there is not so much demand for the cane in their vicinity, they get a considerably higher price for the sugar. These middle sized factories to which Mr. Srivastava refers do not seem to have any advantages at all.

Mr Lowrie—One has not really any idea of what has been done in the past. That is a more recent development.

President—In this book Mr. Srivastava says "Actual working figures for a small factory for the last three years are given in Appendix C. These, when compared with similar figures for big factories (*vide* Appendix D), clearly show that the small factories are in no way inferior in efficiency." When you look up these appendices and compare them, you will find that practically in every respect the small factories are inferior to the bigger ones. Their efficiency is much worse. There is no real comparison at all.

Mr Lowrie—I do not know where these factories he mentions in Appendix C are. If it is the one at the Agricultural College, I do not know whether he put in all the charges. I could not give any information of any value about the middle sized factories. I think that it is a very recent development.

President—You attach a good deal of importance to development and research?

Mr Lowrie—Yes, the idea being to provide a cane which would ripen early and give us a higher sucrose content.

President—Have you any definite proposals as to the action which Government should take in that respect? I understand that on behalf of the Harcourt Butler Technological Institute of Cawnpore Mr. Srivastava has been sent to England to buy machinery in order to establish a small demonstration factory.

Mr Lowrie—There has been a demonstration factory of the kind at the Institute. Personally I have not seen it. Messrs. Shakespear and Deerr would tell you more about it. They have seen it actually working. I do not know what Mr. Srivastava has gone to Europe for.

President—I understand that he is going to buy machinery for a new small factory where he can do his research work which can also be utilised by the local Industries Department. I suppose for training students?

Mr Ryan—Has he not gone in connection with the Central Bureau?

Dr. Matthai—He has gone on behalf of the Imperial Council. They are going to do their technological work in combination with the Harcourt Butler Technological Institute. If there is going to be any substantial reduction in the cost of making sugar here, it has to be mainly on the agricultural side because on the factory side you are fairly efficient.

Mr Lowrie—Yes.

Dr. Matthai—The proposal has been made to us more than once since we started this enquiry that a considerable part of any revenues that Government may get by reason of an increase in the duty on sugar should be utilised for research on sugarcane. The proposal that the Imperial Council of Agricultural Research made to us was that a sum of at least Rs. 10 lakhs a year should be granted to the Imperial Council during the period of protection—which might be 10 or 15 years—for development and research. Now have you any ideas as to the most suitable lines on which that development could be pursued?

Mr. Ryan—We did mention in a supplementary statement to the Royal Commission on Agriculture the Association's opinion as to the lines on which research should be followed. That is to be found in our evidence in the Evidence Volume of the Agricultural Commission.

Dr. Matthai—What is the most important line on which you want developments undertaken? Is it substations here for testing Coimbatore canes?

Mr. Townie—Yes, for testing Coimbatore canes. I take it that Coimbatore will continue to import canes from Java and send seedlings up to Northern India, where conditions are different from Coimbatore, various types to be tested on a small scale for 1940s on a larger scale to take the place of the present Coimbatore canes, as and when those degenerate.

Dr. Matthai—At present I understand from your statement and from other statements that the opening of a sub station in this area has been sanctioned. Where about is Karnal?

Mr. Townie—In the Punjab.

Dr. Matthai—Is there development work of that kind in connection with the Shahjahanpur station?

Mr. Ryan—There is a station at Shahjahanpur.

Mr. Townie—I do not know what connection it has with Coimbatore. I suppose that the officer in charge of that station has direct communication with Coimbatore. He must have tested the Coimbatore canes which were tested at Pusa.

Dr. Matthai—Are there any directions in which in your opinion the introduction of improved varieties could be speeded up and extended?

Mr. Townie—I will give you a case. The other day I wrote to Pusa and pointed out that we thought that Co 214 and Co 218 were degenerating and asked Mr. Wynne Sayer whether he could give me more Co 214 seeds and whether more could be sent from Coimbatore. He said "It is quite impossible to reproduce the exact cane even from the same parents and moreover at Pusa we do not have the accommodation, the field area necessary, to develop and multiply sufficient cane to give out as seed." We got a new cane and multiply it at our own Estates. We find that if we grow cane in the same area, seeding from one year to another without introducing fresh blood, that cane degenerates after a number of years. If the same variety is brought from a place at a distance of say 50 miles, it is found that instead of degenerating it improves. We want something like that done at Pusa, and perhaps at Shahjahanpur.

President—It would be quite impossible for any one centre to produce sufficient seed for the whole province.

Mr. Townie—In 1928-24 they produced enough seed at Pusa to give planters a fairly good start and the planters had to multiply it out themselves. But they got very large quantities from Pusa. As we mentioned in one of our reports to the Agricultural Commission Government could not allow the area at Pusa to be used any longer as it was required for other purposes.

Mr. Ryan—But they promised to continue the research work.

Mr. Townie—Yes. I know that Mr. Wynne Sayer is trying on a small scale other Coimbatore varieties.

President—Do you think that there is anything in the suggestion that large growers should be subsidised by the Agricultural Department to utilise some of their areas for multiplying Coimbatore canes?

Mr. Townie—If they subsidised them, then that department would have to control the cultivation.

Dr. Matthai—They would have to.

Mr. Townie—In Pusa they adopt up to date methods and they have got fieldmen who know all about cane cultivation. On the other hand

the private grower can only provide the land I am afraid I don't think that the one would get a fair chance. It would not be grown under the best conditions unless grown by experts from Pusa.

President—There is no system of private growing of cane for purposes of development and distribution?

Mr. Lowrie—We tried ourselves on a small scale.

President—Take for example cotton seeds. In some parts of India, certain kind of cotton is accepted as best by the Agricultural Department. Then they get the private individuals to grow this cotton and sell the seed to them or they get so called co-operative societies to do that work.

Mr. Lowrie—You can transport cotton seeds from place to place within a reasonable time, but cane you cannot.

Dr. Matthai—What is the kind of work you have yourselves done in the way of research?

Mr. Lowrie—Begg Sutherland and Company obtained seed from Pusa and multiplied them in their own smaller estates attached to the factories and issued seed every year as in advance or simply against payment to the *rayats* in the neighbourhood of the factories, and even gave it out free.

Dr. Matthai—Is it still being done?

Mr. Lowrie—Yes.

Dr. Matthai—On a large scale?

Mr. Lowrie—Not on a large scale. We issued the seed and hoped that the *rayats* would continue to hand the cane to their neighbours.

Dr. Matthai—In your statement here you are suggesting that there ought to be an extension of seed fairs, demonstrations and so on.

Mr. Lowrie—That is to ensure that the best seed goes down every year.

Dr. Matthai—Supposing Government did that, would it be so effective as the factories themselves undertaking it? I can understand central research factories being run by Government but if you want propaganda and demonstration to be really effective don't you think that it ought to be done by bodies which are concerned immediately with the local problem?

Mr. Lowrie—Yes, but I believe that if a factory attempted to give out seed on sale or free, the *rayat* would become suspicious. For instance one factory manager said "I don't like the idea of giving out seed free because they want to know what the *matlab* or the reason is." Whereas if it is given out under Government auspices, they would accept it because Government have no axe to grind.

Dr. Matthai—At present seeds are given out by the Agricultural Department?

Mr. Lowrie—Yes.

Dr. Matthai—It is done, I suppose, on a small scale?

Mr. Lowrie—Yes. The farms are too far apart. Pusa is an Imperial institute. I think that there are two other farms in Bihar, one at Sepaya and another at Sabour. I do not know where Sabour is. I have never been there. Cane growing is such an important industry in Bihar that I think there ought to be more stations. We brought some seed from Sepaya to Daulatpur—a matter of nearly 200 miles. A good deal of that seed was spoilt being too long on the way.

Dr. Matthai—Your proposal comes to this that while research is undertaken by the Imperial Council of Agricultural Research the local Government should at the same time make provision for demonstration and for the distribution of seeds?

Mr. Lowrie—Yes.

Dr. Matthai—The Imperial Council obviously cannot undertake that

Mr Ryan—What we said to the Agricultural Commission is this —
 "The Association is of opinion that the lines of research to be followed up should embrace —

* * * * *

(f) The continuation and extension of the cane breeding work at Coimbatore, attention being paid towards breeding cane suited for different types of soil, rainfall, climatic conditions, of different periods of maturity and of resistance to fungus diseases. The testing of canes so bred would be deputed to the various provincial agricultural departments for testing and distribution when found suitable."

Dr Matthai—That of course has reference to sub-stations of the Coimbatore breeding station?

Mr Ryan—No

Dr Matthai—If you get a new type of cane evolved at Coimbatore and the seedlings are brought here and you have to see how it grows with reference to the actual conditions of this part of the country, would that kind of work be done better under provincial control or under the control of the sugarcane breeding expert at Coimbatore?

Mr Lowrie—The man up here who develops cane for the conditions in Northern India should be under the control of the Coimbatore Expert

Dr Matthai—If that is so, the only part of the work which you can safely entrust to provincial agencies is propaganda and distribution

Mr Lowrie—Yes

Mr Ryan—We have no sub-stations

Mr Lowrie—We regarded Pusa at one time as a sort of sub-station of Coimbatore

President—What about the training given to students? Do you attach much importance to that?

Mr Lowrie—I think we mentioned that in our evidence before the Royal Commission on Agriculture

Mr Ryan—May I read the relevant portion?

"*Sir Thomas Middleton*—On page 496 of your memorandum you express the opinion that more institutions and instructors are needed. What type of institution had you in mind there? Were you referring to farm schools?—Yes

Q—I infer from a perusal of your memorandum that you agree that itinerant instructors are what you chiefly want at the present time?—Yes instructors in connection with cultivation methods of fieldmen I would call them"

President—You feel that there ought to be trained fieldmen in your factories?

Mr Lowrie—We have to demonstrate to the *rayats* in the neighbourhood of our factories how to plant, how to select and how to cultivate after germination

President—What about the actual manufacturing side? I mean the technological work?

Mr Lowrie—You mean in the factory?

President—Yes Is there any difficulty in getting trained men for that?

Mr Ryan—We do not know what the output of the Harcourt Butler Technological Institute is. When Dr Watson was here, he gave the output at 6 students a year. But I should say that saturation would soon be reached

Mr Lowrie—We employ quite a number of students from the Oawnpore Technological Institute. We employ them as chemists and those who show any aptitude for the manufacturing side are transferred to that side

Dr. Matthai—At present, you recruit men who have been trained in Cawnpore and if in the works they show a better aptitude for the technological part of it then you transfer them to that part?

Mr. Lowrie—Yes, but I cannot answer for any group outside our own. Mr. Deen will be able to give you more information on that point.

Dr. Matthai—Are those students trained in technology?

Mr. Lowrie—In chemistry, with sugar as a sort of side line or as the main object of their training.

Dr. Matthai—Do you think really from the practical point of view this technological department in the Institute serves a useful purpose?

Mr. Lowrie—It is so recent that one can hardly give much valuable information. From our own experience so far all I can say is that we have engaged a number of chemists from amongst its students and some of these are working as manufacturing supervisors. But Mr. Deen will be able to give you more information about that. I can't say what the Indian owned factories employ or where they get their supervisors or chemists from but I should imagine they get them from the Technological Institute.

Dr. Matthai—At this stage you would not wish to express any opinion on the point whether it would not be better to get the men trained in the works itself?

Mr. Lowrie—I think it is much better for them to have training in chemistry because you get educated men. The average worker in the factory is never very much better than semi skilled or unskilled and there is a limit to his intelligence. He is all right on a subordinate job and a fairly educated man with a knowledge of chemistry who knows what is actually happening to the sugar in the course of the process is useful.

President—You really want educated men who have been trained not merely in sugar technology but in chemistry and then they will learn all about sugar in your factory?

Mr. Lowrie—That is happening so far. It is only a recent institution. It is only recently that we got men from them. It is only some three years since they commenced training and it is too early to express an opinion.

President—As you know, our usual method in estimating the measure of protection is to attempt to frame an estimate of what we call the fair selling price, that is to say the price at which a typical Indian factory might be expected to sell and make a fair profit. Then having framed the estimate of that price we compare it with the c.i.f. price of the imported article and the difference between those two normally gives us the measure of protection. But in this case we are faced with a difficulty because the free market for sugar in the world is very much restricted, out of a total world's demand of 25 million tons I saw an estimate the other day that the free market, that is to say the market where there is no protection, is about 5 million tons including India.

Mr. Lowrie—That is so.

President—If you are going to protect the whole market in India and gradually supply that market by Indian production, you are going to remove from this market 1 million tons, so that your competition with Java and indirectly Cuba and the beet producing countries in Europe, which at certain times export their surplus sugar, will be rendered more intense and therefore we might expect to some extent the continuance of the present outthroat competition in sugar and possibly a further decrease in price.

Mr. Lowrie—Of course, as you probably know, there are negotiations going on between Cuba and America and Java.

Dr. Matthai—I don't know if you have seen the reference in the Manchester Guardian a fortnight ago that the negotiation between Java and Cuba has broken down.

Mr. Lowrie—We are getting telegrams nearly every day which state that negotiations are still going on and it is believed that something will come

out of them, not so much between Java and Cuba as between Cuba and America. In fact some arrangement has been come to I believe.

Dr. Matthai—That won't help you, on the other hand it will make your position worse. If they are going to restrict their sales to America they are going to dump more into India.

Mr. Lowrie—If Java also agrees to restrict?

Dr. Matthai—If Java does would it help you?

Mr. Lowrie—Yes.

President—Even supposing Java restricted and Cuba restricted, out of the 3 million tons which Java is at present supposed to produce about 1 million tons come to India. Can we expect Java to surrender that market to the Indian manufacturer without putting up a very strong fight?

Mr. Lowrie—No. Of course Java recognizes that it will be a considerable time before we produce one million tons.

President—At present the large factories here are producing about 60,000 tons?

Mr. Lowrie—Yes.

President—I suppose in two or three years or say four years they might produce another 200,000 tons?

Mr. Lowrie—Yes.

President—And say another 200,000 tons if Mr. Clarke is successful with reference to the khandsaris?

Mr. Lowrie—Yes.

President—100,000 tons is a considerable amount. Taking human nature as it is, is it not likely that Java, before this development occurs, will cut down the price to the bone? Supposing we introduced protection on the assumption that Java was going to land her sugar at say Rs. 5-8 per cwt in Calcutta—it is true that her cost of production is considerably below that—as soon as the duty is introduced might she not cut down her c.i.f. price by another Rs. 1-8?

Mr. Ryan—I am not quite sure whether they are dumping now or not.

President—It might not be even necessary to dump, we don't know what the cost price is.

Mr. Ryan—The cost price seems to be coming down. It has been coming down from 10 guilders to 9 guilders and now it is 8.

Dr. Matthai—If you take the present price in Calcutta as Rs. 8-6 per maund out of which Rs. 4-6 is the duty, that gives you Rs. 4 per maund c.i.f. Would you say that the measure of protection required could be based on that figure or is it necessary to take a lower figure?

President—That is to say, should we base our comparison of the Indian cost of production on the c.i.f. cost of Java sugar at Calcutta or on what we estimate as the cost of production in Java plus freight?

Dr. Matthai—If we accept your suggestion of Rs. 10 per maund then on the present c.i.f. price it means a duty of Rs. 6 per maund. Would that duty be sufficient or would you have to take a lower figure corresponding to whatever is estimated as the cost of production in Java?

President—In this connection a relevant point is that last year the Imperial Council of Agricultural Research investigated this question and on their recommendation the Government of India raised the duty by Rs. 1-8.

Mr. Lowrie—Yes.

President—That, the Imperial Council thought, would meet the requirements of the case but within a fortnight of the duty coming on the Java price was reduced by a quarter.

Mr. Lowrie—Yes. We got about 10 annas of the increase in duty. Our prices went up by 10 annas a maund.

President—Afterwards it had to go down?

Mr Lownie —It has gone down since. About 27th February last, the price was Rs 7-15 at Calcutta and immediately the extra duty came on it went up to Rs 9-2 but it has since gone down to Rs 8-6 so that of the Rs 1-2 we got then, we have been able to hold about 7 or 8 annas, rather less.

Mr Ryan —Our latest advice is that the Java cost of production in the country is about 8 guilders per 100 kilos, that is Rs 8-5-2 per maund.

Dr Matthai —That is at the mill in Java?

Mr Lownie —That is the factory cost.

Dr Matthai —What are the items you have to add to that before you get the c.i.f. Calcutta price?

Mr Lownie —Transport to the port and handling, freight and insurance.

Dr Matthai —We know the freight figure which is about 4 annas 6 pies a cwt. How exactly do you get this figure of 7s 7½d which you give here in your memorandum? What is the basis of that statement?

Mr Ryan —That was the 9 guilders price there, per 100 kilos.

Dr Matthai —How did you get 9 guilders?

Mr Ryan —We were told that it had fallen from 10 to 9 guilders. The Pusa Bureau told us that definitely.

Mr Lownie —We say "with regard to the cost of production, the estimate in Java for the 1928 crop was 9 guilders per 100 kilos."

Dr Matthai —Obviously for 1927 we have fairly definite figures from the League of Nations Committee on Sugar. If you took that as your starting point could you not deduce to some extent what the approximate reduction in the cost is likely to be? The Imperial Council of Agricultural Research in the statement they sent in to us took the Java cost in 1926 as 9s 3½ a cwt and then they said that the Java yield of sugar per acre was roughly about 4 tons in 1926 and in 1929 it was 6 tons, and therefore they suggested somewhere about two-thirds of that, would represent present cost.

Mr Lownie —There might be more expenditure in getting out the higher yield.

Dr Matthai —Yes. It is absolutely necessary for us to get a bottom figure.

Mr Lownie —9 guilders for the new crop, that is the last information.

President —They are quoting below 9 guilders now.

Mr Lownie —They have been selling at 8 guilders per 100 kilos until recently. I believe they are inclined to withdraw that price now.

President —That would be about Rs 4-4 per cwt.

Mr Ryan —That is Rs 8-5-2 on the 8 guilder basis. Here is a definite statement "The cost of production in Java during the season 1929 came to 1-78 cents per lb. Computing this at the present rate of exchange namely 100 guilders equal to Rs 2-78 that brings the cost of production approximately to Rs 4-1-1 per maund."

President —Roughly Rs 5 a cwt.

Mr Ryan —They say that this figure is considerably higher than the figure quoted by the Java Trust.

President —That is in 1929.

Mr Lownie —Yes. A good deal of that was sold at 11 and 12 and even some at 13 guilders, I think.

Mr Ryan —These people draw the conclusion that Java is selling below the actual cost of production.

Dr Matthai —What is the letter you are reading from?

Mr Ryan —This is a letter from one of our members, Mr Peel Yates, of Messrs Bird and Company, who is Vice Chairman of the Association.

President—We have no ground to say that they are selling below the cost of production. Last year's dividend was very substantial.

Mr Lowrie—We have no proof.

Mr Ryan—The conclusion that we have come to is that Java has still something up her sleeve.

President—We have got to allow a margin for safety and at the same time we must take some reasonable figure for their cost of production. It looks as though somewhere about Rs 4 a cwt would provide the necessary margin for safety.

Mr Lowrie—Rs 3 a maund should do. I took As 3 a maund for cane and the cost came to Rs 1-4 for a maund of sugar, that is for the cost of cane only. Taking a rupee for the cost of manufacture that is Rs 2-4.

President—At the factory?

Mr Lowrie—Yes. Then there is about As 3 for freight. I don't know what the handling charges are. It cannot be very much.

President—As 3 for freight?

Mr Lowrie—Yes. Rs 4-0 for duty. The landed cost is something like Rs 6-13 per maund.

President—How much does it come to?

Mr Lowrie—Rs 6-13.

Dr Matthai—That is Rs 2-7 duty free?

Mr Lowrie—Yes. I have allowed nothing in that for handling charges at the other end.

Mr Ryan—There must be an item for that.

Mr Lowrie—That sugar can be landed at Cawnpore at something like Rs 8-4.

President—According to your estimate if we allowed another As 3 for handling charges and taking it to the port which is a fairly liberal allowance, it would come to well under Rs 4 c i f per cwt.

Mr Lowrie—Yes, Rs 3-13 or Rs 3-14 per cwt.

Dr Matthai—Taking Rs 8-0 per maund as the present price Rs 1-6 is the duty and Rs 4 is the duty free price. If you want to bring it to Rs 10 you want a duty of about Rs 6.

Mr Lowrie—Yes.

Dr Matthai—That is a difference of Rs 2 more.

Mr Lowrie—That will bring it to 11 shillings as against Rs 6 per maund. The highest figure is Rs 6.

Dr Matthai—The list of duties in your statement looks to me rather misleading. Take for example, Great Britain. Isn't there an excise duty?

Mr Lowrie—Yes.

Mr Ryan—There is the preferential duty.

Dr Matthai—This 98° polarisation is refined sugar. They pay a duty of Rs 5-11-0 per maund. There is an excise duty on locally made sugar. In order to get the correct measure of protection in Great Britain you have to take the difference between this duty and the excise duty and add the subsidy to the Beet Sugar industry.

Mr Lowrie—That is for Great Britain.

Dr Matthai—Take the United States. On Cuban sugar it is Rs 4 a maund. The bulk of the sugar imported into America is Cuban sugar. Therefore practically you might say the effective duty is Rs 4 a maund on 96° polarisation. Most of that sugar is unrefined. That corresponds to sugar below 23 Dutch Standard, so that we have reached the American level for practical purposes.

Mr Lowrie—Australia refuses to import and South Africa too.

President—You can't tell us what these duties in South Africa are?

Dr. Matthai—It is what they call a suspended duty. If the import price goes below a certain figure then without reference to the Legislature the duty may be brought into operation.

Mr. Ryan—They take it that dumping has set in.

Dr. Matthai—This increase in duty that took place in South Africa recently was the result of the suspended duty being enforced.

Mr. Ryan—Automatically I suppose?

Dr. Matthai—Yes. The practical issue for us now is to find the correct figure if you are prescribing protection for a period of 10 or 15 years. We want to get a figure which we may take as the minimum price at which sugar is likely to be landed.

Mr. Lowrie—Yes, in Calcutta.

Dr. Matthai—My suggestion is that the Committee of the Sugar Producers' Association should consider this point and give us a considered note.

Mr. Lowrie—Our difficulty would be to get anything like an authoritative figure from Java. They are refusing to give any figure.

Dr. Matthai—You have data in your possession about the extraction and output in Java for 1927-28. From them you could probably work out the present cost.

Mr. Lowrie—Yes.

President—Since when have the Java people refused any information?

Mr. Lowrie—Java hitherto published for the benefit of the Sugar industry of the world their results and the result of that has been to help competitors and therefore I understand they are going to curtail what they are going to make public.

President—That is not in connection with this enquiry at all?

Mr. Lowrie—I don't think so. They have of course been letting Java canes go out of the country.

President—They also get canes from India too occasionally.

Mr. Lowrie—Yes.

President—If a protective duty is introduced over a long period of years, say for purposes of argument, 15 years, in the course of that time there would probably be considerable improvements in the cane cultivation in India resulting in a lower price possibly and there might also be some improvements in the practice of the mills which might also result in a lower price. So it occurred to us that it might possibly be from the point of view of the consumer and from the point of view of the factories, cultivators, etc., most advantageous if instead of putting on one duty for the whole period, we were to separate the duty into two. For the whole period of 15 years the basic duty,—let us assume for argument's sake that Rs. 6 is the duty required—should be in force and then for the first seven years partly to stimulate the Indian manufacturer of white sugar and partly also to protect the cultivators of sugarcane during the initial period for any great improvement to be made on new kinds of cane that may be spread widely over the country, an additional duty of Rs. 2 should be imposed. That is to say the duty would be Rs. 6 for the whole time but for the first seven years it would be Rs. 8.

Mr. Lowrie—Per maund or per cwt?

President—Per cwt. At the end of seven years an enquiry has to be made, that enquiry being limited to whether this additional duty should be increased or decreased. We are only considering a figure for argument's sake. How does that appeal to you?

Mr. Lowrie—Java sugar is landed at Calcutta at Rs. 4 a maund. A duty of Rs. 6 would make it Rs. 10 a maund in Calcutta and in Cawnpore from one of our factories Rs. 10 8 0. If we are paying Rs. 8 for the cane that will be Rs. 5-8. The cost of production has to be added on to that. It would probably suit some of the factories quite well and others who are not quite so

efficient will have to close down. The uncertain factor is Rs 4 landed in Calcutta.

President—On the question of policy don't you think that in seven years some reduction in the price of cane might be expected and some improvement in the practice of the factories?

Mr Lowrie—Yes, some reduction in the price of cane. The majority of factories could increase their efficiency. Begg Sutherland & Co are striving hard to increase further their factories' efficiency, but for the last two years very little progress has been made, the limit having been reached.

Mr Ryan—That is why we took the ten year period. We feel that at the inception of these improvements the pace is slow and it speeds up afterwards.

President—What we are suggesting now is a normal duty for 15 years of whatever might be required plus in the first seven years an additional duty.

Mr Ryan—The normal duty should be for 10 years. You have got to allow some weightage for the slowness in getting these things to work and in raising the capital. Given the promise of stability the pace would be faster in the later years.

Mr Lowrie—That is my view too.

Mr Ryan—When we thought about it, we wondered what the period would be. It appeared to us that 10 years would be about the minimum in which our hopes had a chance of being met.

Dr Matthai—Probably you are right. It is difficult in regard to an industry like this, an agricultural industry mainly to get the kind of improvements that you want effected in so short a period.

Mr Ryan—At the inception it is rather slow.

Mr Lowrie—To get a start it would take two or three years.

Dr Matthai—The suggestion that the additional duty should be fixed for a shorter period has reference partly to the possibility of your costs being reduced. It has also reference to the fact that possibly the import price may rise.

Mr Lowrie—Yes.

President—It is not suggested that this additional duty should automatically cease at the end of seven years but should be subject to an enquiry. As regards the basic duty that would be in force for the whole period and would not come within the purview of the enquiry and therefore it would give you the necessary assurance of protection.

Mr Ryan—The point that we have had to assume is that this enquiry is to superimpose a protective duty on the present revenue duty. That is what we have had to assume.

President—That is not correct.

Mr Ryan—The correct aspect would be the substitution of the present revenue duty by a basic protective duty.

Dr Matthai—That is what it comes to.

Mr Ryan—That would account for our suggestion for a telescopic rate the top of which would be level. The revenue duty, the protective duty and the c.i.f. price, without duty would be the intermediate sections. An adjustment would be necessary between the revenue duty, the protective duty, and the price without duty in order to keep the top level and stabilised. Now that we know that the idea is to replace the present revenue duty by a protective duty, the position is slightly altered, but still it does not alter the fact—it is there all the time—that the time is hardly enough to get things going to the degree that is necessary.

Dr Matthai—There is an alternative scheme that we may try if practicable and that is a sliding duty.

Mr Ryan—That was our meaning.

Dr Matthai—We may find that for administrative reasons it is impossible to have a sliding duty?

Mr Ryan—I see the difficulty

Dr Matthai—The question is whether a higher duty for a definite period, subject to an enquiry at the end of that period, would be an effective substitute for a sliding scale?

Mr Ryan—The practical results would be the same to us. We are only concerned with the top of the telescope, that is the ten rupee level, and we want that to be stabilised.

Dr Matthai—Supposing at the end of seven years it is found that you cannot get Rs 10 a maund unless the additional duty is retained for another 4 or 5 years, then obviously the thing would be continued. It does not mean that at the end of that period the additional duty would cease.

Mr Ryan—I quite appreciate that.

Dr Matthai—If prices rose during the next few years, then this duty would be too high for the purpose of giving you your Rs 10.

Mr Lowrie—That is where the telescopic rate will come in, but you say it is impracticable.

Dr Matthai—I don't say that it is impracticable, but it is difficult.

Mr Lowrie—It is difficult.

President—Taking gur, the competition with gur comes from the cheaper kinds of imported sugar. Do you think that it would cause any serious inconvenience to the factories out here, if partly for simplicity and perhaps also from the point of view of making certain that the Indian gur industry, which is after all the basic industry, is adequately protected, we suggest that the duty on all kinds of sugar should be the same? Do you think that that would adversely affect any branch of the industry out here?

Mr Lowrie—Some of the refineries have imported Java gur, with what success I cannot say. But I know that they did buy a certain quantity and I presume that they found it paid. One cannot get at the results because just after they imported gur the boycott of Java sugar was imposed and my information is that this refinery was not able to sell any sugar, including what they made from Indian gur.

President—From the point of view of the refinery, we guarantee or attempt to guarantee a certain price for Indian made sugar including the sugar made in the refineries. Now their price would depend upon the price of cane and the price of gur. But if they are allowed to go behind that and import Java gur, is not that rather contrary to the scheme of protection?

Mr Lowrie—Yes.

President—They might attempt to use the Indian gur?

Mr Lowrie—Yes, as they have always done hitherto.

President—Is this only quite a new development?

Mr Lowrie—It (Java gur) is only a recent development because the price of Indian gur was uneconomically high. I don't think they would have considered it otherwise. The price of gur is not regulated by the price of sugar.

Dr Matthai—No. In any case, if we decide to make provision for people who make sugar out of gur whether it is imported or made here, we are definitely encouraging a wasteful method.

Mr Lowrie—It is wasteful.

Dr Matthai—If our scheme conflicted with the gur refinery, that ought not to weigh with us.

Mr Lowrie—We have said so.

Mr Ryan—We have ourselves said that it seems practically certain and inevitable that sugar refineries using gur as their raw material must disappear. We feel that.

Mr Lowrie—In the past three or four years experience has shown that the price of gur has very little relationship to the price of sugar.

Dr Matthai—That is your view?

Mr Lowrie —The past experience has been that Not only that, we have also not been getting enough *gur* for refineries

President —Mr Clarke holds the other view He is very strong on the subject and he says that the price of imported sugar has a very direct effect on the price of *gur*

Mr Lowrie —He is dealing with a very different area altogether

President —This is what he says (Showed Mr Clarke's written statement)

Mr Lowrie.—He talks about the price of *gur* falling throughout the year We have never found *gur* purchasable after May It is all gone somewhere

President —Could you let us have a note on that paragraph of Mr Clarke's? After all you must have a very accurate knowledge of the price of *gur* because you have been buying it for a great number of years

Mr Lowrie.—I shall let you have a note later on We are dealing with a different market I suppose Mr Clarke is taking the whole of the United Provinces I do not know whether he is taking the Gorakhpur area into account or not, but I should think that his figures relate more to the Bareilly and Shahjahanpur area and possibly Meerut too

President —Actually you would expect the Gorakhpur *gur* to respond more quickly to the price of imported sugar

Mr Lowrie —You mean to the price of cane?

President —No, to the price of imported sugar The Gorakhpur *gur* is used by refineries If the price of imported sugar goes up, there is a big demand for it and then the price of *gur* naturally goes up

Mr Lowrie —There is more *gur* than what the refineries require. Gorakhpur *gur* goes to Bengal, Punjab and I do not know to what other places

President —What do they do with it?

Mr Lowrie —We have been told that more of it is being eaten and therefore there is loss for the refineries

President —The taste must be changing then?

Mr Lowrie —On the process of manufacture is changing

President —It may be improving?

Mr Lowrie —Yes

President —That is the reason why I was asking Why is it that in Gorakhpur *gur* is always spoken of as refining *gur* and in Meerut it is called eating *gur* Why can't they manufacture the same class of *gur* in each place? What is the limiting factor? I think we asked Mr Wynne Sayer and he said that to make eating *gur* you required more experience

Mr Lowrie —I was going to say that in Meerut there has been the habit of making eating *gur* for many years and down in Gorakhpur to make an inferior *gur*

President —He also said that it had something to do with the quality of the cane

Mr Lowrie.—I do not see what the quality of the cane has got to do with it

President —If a farmer were to migrate from Meerut to Gorakhpur would he not be able to make a good class of eating *gur*?

Mr Lowrie —Yes The types of cane may be different, but the sucrose is after all the same in any type of cane It all depends on how it is manufactured

President —It depends perhaps on the proportion of lime used In the dark *gur*, there is much lime used

Mr Lowrie —It is probably burnt more than the other *gur* They are perhaps more careful in the making of eating *gur*

Dr Matthai —Can you give us the prices of gum for a period of years and the corresponding prices for sugar?

Mr Lowrie —I could give you from 1920 onwards

Dr Matthai —Can't you give figures for years earlier than 1920?

Mr Lowrie —I could not say without looking up the books

Dr Matthai —Then the figures from 1920 onwards would do

Mr Lowrie —Yes

President —We had an application from Messrs Carew & Co regarding the duty on molasses. They pointed out that the duty on methylated spirit when imported was considerably less than the duty on molasses which they themselves utilised in the manufacture of this spirit. Their suggestion was that the duty on molasses should be lowered or, if that was not possible, the duty on methylated spirit should be increased. As regards increasing the duty on methylated spirit that would hit the lac industry heavily because methylated spirit is used in the manufacture of lac. Manufacturers have protested most vigorously against that. On the other hand if you reduce the duty to 15 per cent I am not clear whether it would affect the Indian sugar industry to any considerable extent.

Mr Lowrie —Messrs Carew & Co, are in the dual capacity of sugar and molasses manufacturers in one area (Rosa) and spirit manufacturers in another. Their largest distillery is at Asansol. Asansol is too far away for them to transport their Rosa molasses to make spirit. Therefore they buy in the cheapest market which is Calcutta and they buy the imported Java molasses.

President —Yes, that is their point. If you reduce the duty on Java imported molasses it would not hurt any one because there is no sugar industry in Bengal and the railway freight would prevent it from going into the up country market very much.

Mr Lowrie —I cannot agree.

Mr Ryan —Our Association protested against it when we knew of it. We suggested that instead of a reduction in the duty there should be an increase. We are in an invidious position as regards Messrs Carew & Co because they are members of our Association as sugar producers.

President —Supposing it was suggested that the manufacturers of methylated spirit might be allowed to import their molasses at a lower rate of duty, that would not affect anybody?

Mr Lowrie —We also manufacture spirit from our own molasses.

President —Do you think that the stuff that they manufacture at Asansol would compete with yours upcountry?

Mr Lowrie —Yes. There is no other distillery in the Association excepting those belonging to Messrs Carew & Co and ourselves.

President —Another aspect of the case is that if you reduce the duty from 25 to 15 per cent on all molasses imported, a considerable amount of molasses will be used in the manufacture of country spirit.

Mr Ryan —Would you not hit the khandasaris pretty hard thereby?

Mr Lowrie —Their molasses is used in Bihar and in Bengal for mixing with tobacco.

President —If you reduce the duty from 25 to 15 per cent, the result will be that the provincial Governments with whom these various distilleries have contracts would say "the duty is now reduced, you are paying less and we shall also offer you a smaller contract price", and that you would be depriving the Central Government of its revenue and giving it to the provincial Governments. So that if it is introduced as a proposal affecting all molasses, for whatever purpose it might be used, the result would be that Messrs Carew & Co would not be benefited so far as distillation of liquors is concerned.

Mr Lowrie —As you say provincial Governments would soon find out that the molasses which is their raw material has become cheaper. Messrs Carew

& Co might expect to get off for three years but would be found out eventually. We do not want the duty on molasses to be reduced at all, as sugar producers, because the price we get for molasses may make all the difference between profit and loss in the manufacture of sugar.

Dr. Matthai—If we decided in estimating the fair selling price of sugar to take into account a price for molasses which corresponds to a 15 per cent duty on molasses you would not complain.

Mr. Lowrie—That is so.

Dr. Matthai—Have you any information as to the present consumption of molasses in India? The total imports from Java is 70,000 to 80,000 tons a year. What is your estimate of the total production?

Mr. Lowrie—About a third of the sugar, about 30,000 tons.

Dr. Matthai—How much would you add on the *khandaris*' account?

Mr. Lowrie—Do you get more molasses?

President—Do they make more molasses? I understood they made a very small percentage of sugar and the rest they turned out is *gur*.

Mr. Ryan—Mr. Sivastava gives a good deal of information on that point. We don't necessarily agree with his conclusions.

President—I was under the impression that these *khandaris* put their massecuite into their centrifugal and then they get a small percentage of sugar out and they make the rest into *gur*.

Mr. Lowrie—It is still refinable.

President—Yes. What they do is simply to heat it and make it into *gur* as it stands without taking away any molasses.

Mr. Ryan—They also win the sugar out of the *rab*.

President—Yes, and the rest is made into *gur*.

Mr. Lowrie—If they work as efficiently as a refinery, they only get sugar and molasses.

Dr. Matthai—Supposing we took 120,000 tons as the output of sugar in India now?

Mr. Lowrie—It is rather less.

Dr. Matthai—Say 100,000 tons?

Mr. Lowrie—I think Mr. Wynne Sayer's figure contains a good deal of refined sugar and in the past 12 months there has been considerably less refined sugar made. 100,000 tons may be right.

Dr. Matthai—Out of that 80,000 tons is made in modern factories. That corresponds to about 20,000 tons of molasses. Then you have got 10,000 tons. Let us assume that is made by *khandaris*.

Mr. Lowrie—You get a larger amount of molasses from refineries. You get about 60 per cent of sugar and the rest is molasses and loss.

Mr. Ryan—That is correct and is supported by Sivastava. He says 'They produce comparatively more molasses and less sugar'.

Dr. Matthai—Approximately what figure for molasses should we take?

Mr. Lowrie—You may put it at 25,000 to 30,000 tons.

Dr. Matthai—70,000 tons is imported, let us say about 120,000 tons of molasses is consumed in India at present. The point that occurs to me is that supposing the sugar industry is able to increase its output to, say, 500,000 tons ultimately and you are going to have one third of that in the shape of molasses, is it not likely that you are going to get a much lower price for molasses hereafter?

Mr. Lowrie—At one time the disposal of Java molasses was a problem.

Dr. Matthai—I find from their latest figures that they have used in the local distilleries a little over 120,000 tons of molasses and they turn out about 700,000 tons?

Mr Lowrie—Very nearly a third is molasses for 9 per cent of sugar you get 3 per cent of molasses per 100 tons of cane and a little more in the case of the sulphitation process

Dr Matthai—You may soon reach a stage where your molasses will not be saleable?

Mr Lowrie—I think so For every maund of sugar that we make, say, at Rs 10, we are getting a third of a maund of molasses at Rs 2 and therefore we are going to lose 10 or 12 annas per maund of sugar

Dr Matthai—Therefore what I am trying to suggest is that if you are taking a long view and fixing your price on that basis, it would not be quite right to take the present price of molasses as an appropriate credit under that head

Mr Lowrie—That is quite reasonable

Dr Matthai—If you are getting Rs 1 12 per maund now for molasses I think the correct figure would be somewhere about a rupee

Mr Lowrie—Yes, and therefore you take a third of that to reduce the recoverable price as sugar, say 10 annas on the present molasses price It is more than Rs 1 12 It is nearer Rs 1 During the last 12 months there has been a large demand for molasses for Indian tobacco

President—There has been also a big demand for Indian tobacco?

Mr Lowrie—Yes

Dr Matthai—Molasses is not used in tobacco which is smoked but in tobacco which is eaten, is it not?

Mr Ryan—In both the more tobacco is imported the more molasses is imported

President—Messrs Carew & Co have said that they are interested both in sugar manufacture and in imported molasses We have not seen them recently but perhaps they balance one claim against the other?

Mr Lowrie—Perhaps their claim for spirits overbalances all others

President—Have you seen any of these small khandsari factories working?

Mr Lowrie—No

President—I was wondering if it is a continuous process, manufacturing sugar and then *gur* and then molasses at the end or do they manufacture sugar and molasses and then manufacture *gur* separately in some other pans?

Mr Lowrie—I don't know

President—I see you press for facilities in regard to communications Your chief difficulty I understand comes from the District Boards?

Mr Lowrie—I am talking mostly from Regg Sutherland's point of view now We have some factories where the roads are not good and the distance which the carts can operate is limited to about 15 miles perhaps, a day We don't carry cane much further than that but if we have motor lorries then I think we can tap sources further afield, I mean places which are well away from the railways We would like to have motor lorries but the difficulty is that District Boards object to them as they say that those would damage the roads and culverts

Dr Matthai—What district is this?

Mr Lowrie—District of Gorakhpore, Tahsil Deoria

President—So that before you can use motors all the bridges will have to be renewed?

Mr Ryan—The Public Works Department are very obstinate

President—What do they charge by way of taxation for motor lorries?

Mr Lowrie—They would not allow the lorries to run at all on those roads in this particular instance

Mr. Ryan—These roads and culverts would have to be renewed in my case. Motor buses are now-a-days increasing very much. The Public Works Department have had to give way and the District Boards will have to follow. They either will not allow us to use the roads, or else they ask us to keep to the *leak*, or *putri*.

President—Really in some parts of Rohilkhand.

Mr. Lowrie—I can't answer for that but judging from the motor traffic in the United Provinces where there is a semblance of a road at all they have prohibited motor lorries.

President—Probably they thought the lorries would be very heavy, 10 tons or so.

Mr. Lowrie—We told them what size of lorries we had in view. 5 ton lorries were what we were thinking of.

Dr. Matthan—What precisely is this difficulty about tramways?

Mr. Lowrie—One of our factories, Ryan, runs a tramway between the railway station and the factory to carry cane, coal and limestone and carry the sugar away.

Dr. Matthan—What distance is that?

Mr. Lowrie—8 miles. We could not find enough carts at a reasonable price and we had to look about for some means of transport and we fixed on the tramway and we asked for permission to use the district board road for a few miles. They gave us sanction for five years, the only condition being that we undertook to keep the road in good condition and made the necessary repairs in those five years. We applied for renewal recently and they said they would give us sanction provided we paid one anna a ton for everything we carry. We are now prying that.

President—They have got powers to prevent you from using the road?

Mr. Lowrie—I think so. At Marhousah we have a tramway, but there the District Board is much more reasonable. We are thinking of extending the tramway and we don't know what difficulties we are then going to have with the District Board.

President—What about railways?

Mr. Lowrie—All our factories with the exception of Nadhas, Belapur and Burmah and Catew's are on the Bengal and North Western Railway.

President—Do they treat you fairly?

Mr. Lowrie—On the whole they do.

President—They give you special station to station rates?

Mr. Lowrie—No. It is Rs 5 per wagon minimum. That wagon carries 180 maunds and it works up to 30 miles which is the minimum distance. They make no reduction below that. It works out to half an anna a maund up to 30 miles.

President—That suits you very well?

Mr. Lowrie—Yes.

Dr. Matthan—You don't want to press that suggestion about the reduction of freight on sugar?

Mr. Ryan—It has been put forward. There is another thing which I have omitted to put forward. I argued it before, when I was giving evidence before the Sugar Committee, and that was preferential booking for Indian sugar as compared with the imported.

Dr. Matthan—Has there been any real practical difficulty?

Mr. Ryan—There has not been in recent years, because there has not been a shortage of wagons. Our complaint is that the wagons containing imported sugar run up from Calcutta to these parts when there is available sugar here which could not be got out.

President—That was during the war?

Mr Ryan —For a few years even after the war

Mr Lowrie —It could come here from Calcutta, because it was a straight run

Dr Matthei —As far as the reduction of freight is concerned, unless the freight on Indian sugar is reduced and the freight on imported sugar is kept at the present level, you are not likely to benefit

Mr Ryan —No, and then we don't know when we are not likely to get into trouble with "undue preference"

President —Another point is that railways to some extent are in competition with motor transport and that must affect their freights

Mr Lowrie —Yes

ZAMIDAR FARMERS' ASSOCIATION

**Oral Evidence of Mr. H. S. GUPTA recorded at New Delhi on
Saturday the 8th October, 1930**

President—You are Secretary of the Zamindar Farmers' Association?

Mr. Gupta—Yes

President—Is your head office situated at Moradabad?

Mr. Gupta—At Bilari

President—Is it in the Moradabad District?

Mr. Gupta—Yes

President—That is in Rohilkhand Division, is it not?

Mr. Gupta—Yes

President—Is there a good deal of gum manufactured in Rohilkhand apart from sugar?

Mr. Gupta—No. Only in exceptional cases gum is manufactured

Dr. Matthal—How many members have you in your Association?

Mr. Gupta—At present there are 25 members. Up till now, it was restricted only to zamindars who are carrying on farming. Now we are making provision for enabling the tenants also to become members of our Association. We hope to have a number of members as a result of that.

Dr. Matthal—Roughly what is the average size of a holding so far as sugarcane is concerned? What is the average area under sugarcane?

Mr. Gupta—More than half the members have 100 acre farms with tube wells and other modern machinery.

Dr. Matthal—I suppose practically all the sugarcane is used in the Bel process?

Mr. Gupta—The whole of it.

President—Do some of your members manufacture white sugar?

Mr. Gupta—Some of them are manufacturers of white sugar, while others sell juice and not cane.

President—The practice is merely to purchase or hire crushing mills and crush the cane and sell the juice?

Mr. Gupta—That is the practice with the tenants and not with the farm owners. The latter have bigger plantations and have their own power crushers.

Dr. Matthal—As far as the bulk of your members are concerned, they have their own cane, they crush it themselves, they boil it into a rab and they themselves convert the rab into sugar?

Mr. Gupta—Yes.

Dr. Matthal—But are there any of your members who act merely as entrepreneurs who buy the juice from tenants?

Mr. Gupta—I am myself one. I have also got my own plantation.

Dr. Matthal—You do both, do you?

Mr. Gupta—Yes. This thing has been carried on in my family for the last 100 years or so.

Dr. Matthal—Therefore there are some people who besides crushing their own cane, and running their own centrifugals, purchase the juice, boil it themselves into a rab and then pass it on to a farm owning centrifugals?

Mr Gupta—They have their own centrifugals

Dr Matthai—They only buy the juice?

Mr Gupta—Yes

President—There are three classes of people? First of all there is the cultivator who crushes the cane and extracts juice. He then sells it to the *rab* manufacturer who makes the *rab* and then the *rab* manufacturer passes it on to another manufacturer with the centrifugals.

Mr Gupta—That is not mostly the case. Most of the manufacturers have their own centrifugal machines. Supposing a manufacturer has a very small quantity of juice in a village, he has been carrying on his business and now he cannot pull on with his business for certain reasons, economic or financial or other reasons. What he does is he advances money in the beginning to purchase juice. Some money is already with the tenant. He must purchase juice for this money, otherwise he cannot realise it. It is not possible for him to have his own plant for that small quantity and so he passes it on to some other man.

Dr Matthai—He realises his money in the form of juice?

Mr Gupta—Yes, he cannot do it otherwise. It is very difficult because the poverty of the cultivators is very great.

President—Is there any *gur* manufactured in the district of Moradabad?

Mr Gupta—Not generally or on any large scale. It is done only by those tenants who do not like to sell their cane for certain reasons. Supposing they have got the juice and they are not on good terms with the *zannidar* or with the *khandasari* who has purchased juice from that place or supposing they want money earlier, in those cases only *gur* is manufactured.

President—You have taken the price of 8 annas for cane or the corresponding price for juice. Supposing the price fell down to say 6 annas, would they manufacture *gur* in that case?

Mr Gupta—If the price falls down, then they would not like to make *gur*. It is only when the price of *gur* goes higher they would like to make *gur*.

President—Supposing they could not sell their sugarcane to *khandasaris* except at a lower price, would they then manufacture *gur*?

Mr Gupta—As a matter of fact in Rohilkhand Division they are accustomed to sell their juice and so they would like to sell as juice first. Even now at this time some of the juice of certain tenants has not yet been sold and yet they are for selling it although this is the best time to make *gur*.

Dr Matthai—This particular area with which you are concerned has been so familiar with the manufacture of indigenous sugar that the grower has got into the habit of using his cane for the purpose of *khandasari* sugar?

Mr Gupta—Yes.

President—Does that apply to the whole of the Rohilkhand Division?

Mr Gupta—Yes. It is only in exceptional cases that *gur* is made.

President—I see there are six districts in Rohilkhand Division, viz, Bareilly, Bijnor, Budhain, Moradabad, Shahjahanpur and Pilibhit.

Mr Gupta—In certain parts of Bijnor, *gur* is made. Of course, that is exceptional.

President—Speaking generally it is true to say that in these six districts, the juice of cane is sold?

Mr Gupta—Yes, and then it is turned into *rab*.

Dr Matthai—Supposing, for example, there was a perceptible rise in the price of *gur* in your area, then would you still be able to get your juice for about the same price?

Mr Gupta—It would be very difficult. For example, when the war began, the price of sugar went up and the price of *gur* also went up.

The *khandsari* had already purchased the juice at a lower price because money was advanced first. When the prices went up very high, the *khandsari* found it rather difficult to get his money for the time being because the tenant rather liked to make it into *gur*. It is a thing which he can do himself. He does not need any man to make it for him.

President—Does the price of juice depend upon the price of *gur*?

Mr. Gupta—No. That was an exceptional case.

President—Not unless the price of *gur* went up very high.

Mr. Gupta—At that time, the price of sugar went up very high. The price of *gur* also went up. The tenants did not like to get lower prices because the money was advanced at lower rates.

Dr. Matthai—Taking the normal time he would not?

Mr. Gupta—No.

Dr. Matthai—Am I right in thinking this: the price that you took as the market price of cane or the equivalent price of juice, does that roughly represent what he would realise if he turned the juice into *gur* himself? Supposing for example he turned the juice into *gur* instead of giving it to you for manufacturing it into *rab* I should say for a price of 8 annas per maund of cane he might want to get about Rs. 5 per maund of *gur* taking 10 per cent of cane as *gur*. Am I right in thinking then that the price of 8 annas which is now the market price of cane roughly corresponds to the current market value of *gur*?

Mr. Gupta—You mean with the present price of *gur*?

Dr. Matthai—Yes. Supposing he turned the cane into juice for the purpose of making it into *gur* he would realise more or less what he realises now by selling the juice to you?

Mr. Gupta—At present you mean?

Dr. Matthai—Yes.

Mr. Gupta—I cannot give you any exact figure.

Dr. Matthai—It is very difficult to make any comparison.

Mr. Gupta—Because the price of *gur* fluctuates and it mostly depends upon the quality. For example this year on our side the quality of the *gur* is not very good because the cane has been affected owing to want of rains. Naturally the cultivator would not like to make his own *gur* this year because this is not a good year to make *gur*.

Dr. Matthai—What is the price of *gur* in your area?

Mr. Gupta—At this time?

Dr. Matthai—Yes.

Mr. Gupta—I think that it is something like Rs. 4 per maund.

President—I suppose it costs the cultivator—I am calculating from your figures—about 6 annas a maund for crushing?

Mr. Gupta—For crushing only?

President—Yes.

Mr. Gupta—I don't think so.

President—Six annas per maund of juice for crushing. In your representation you say—"The market prices of the various products were as follows: price of 18,867 maunds of cane at 8 annas per maund Rs. 9434, price of 11,321 maunds of juice at Rs. 56 per *Jarda* Rs. 10141." Therefore I take it that the difference between the two figures, viz., Rs. 710 represents the cost of crushing. Is that correct?

Mr. Gupta—Yes. As regards these figures I should like to say that last year Rs. 56 was actually offered for this farm and I have kept that figure here.

Dr. Matthai—This is the market price and not the cost?

Mr. Gupta—That is so. The cost of cultivation of one maund of cane is $1\frac{1}{2}$ annas.

President—This 8 annas is not really a net price to the cultivator?

Mr. Gupta—No. This is what he was actually offered. As regards the price of Rs. 50 per *karda*, I myself was offering for this plantation and I have kept that figure here. It is very difficult to get figures. A small *khandani* cannot manage to keep figures.

President—What do you think would be the cost of crushing 100 maunds of sugarcane?

Mr. Gupta—I have given you the charges for crushing and cutting.

President—Plus Rs. 508 is for how many maunds?

Mr. Gupta—18,807 maunds of cane.

Dr. Mathur—That comes to roughly 7 or 8 pies per maund of cane?

Mr. Gupta—About 8 pies per maund.

President—It comes to about 6 to 7 annas per maund of *gur*.

Mr. Gupta—Yes.

President—Would that include the cultivator's own labour and the hire of his oxen?

Mr. Gupta—These are the figures of a power mill and not a bullock mill. Moreover cutting in this case is not much because the factory, centrifugals and the other things are located in the centre of the plantation. So the charge for cutting is not much here but in the case of a cultivator, he has to take the cane some little distance.

President—Take an ordinary cultivator who is going to crush an acre of cane. Exclude the cost of his own labour and the labour of his cattle. Would it be right to conclude that the cost of crushing per maund of *gur* produced would be about 6 or 7 annas, that is to say, that would mainly represent miscellaneous expenditure such as hire of mill and so on? Would that be about right?

Mr. Gupta—I think it would be because he will get a crusher mill for about Rs. 25.

President—For how long?

Mr. Gupta—For the season.

President—That would be about a rupee a day?

Mr. Gupta—Yes.

President—How much could he turn out in a day?

Mr. Gupta—10 maunds of juice.

President—That would be how much cane? Would it be 50 maunds of cane a day?

Mr. Gupta—Yes, about 50 per cent extraction with the indigenous cane.

President—For the hire of a mill, it would be a rupee?

Mr. Gupta—Yes.

President—It would come to about 11 annas per maund crushed?

Mr. Gupta—Yes.

President—If you take 10 maunds of cane for one maund of *gur*, it would be 10 annas per maund.

Mr. Gupta—Yes, excluding his own labour and the charges for the bullocks.

President—I had the impression that per maund of *gur* including hire of mill, pans, furnace and so on, it would come to about a rupee?

Mr. Gupta—Yes, even less.

President—Excluding his labour and that of his bullocks?

Mr. Gupta—Yes.

Dr. Matthai—If you included his own labour and that of his family and his bullocks, it might come to a couple of rupees.

Mr. Gupta—The charge for bullocks is 12 annas a day. There would be three more men working.

Dr. Matthai—A couple of rupees might more or less cover all the costs?

President—Rs. 2 to Rs. 2.4 would cover everything.

Mr. Gupta—It would come to Rs. 2.8 for a day.

President—Could you tell us how this bel system of sugar manufacturing works? I have read that the Hadu system is simply a development of the Bel system. To understand that, I want to know how exactly the Bel system works?

Mr. Gupta—In Rohilkhand there are 5 pans of various capacities. The biggest is put on the top of the furnace and the smallest (the striking pan) at the lowest. Juice is got from the tenants and a small quantity is put into each one of them and then the boiling begins. Then, it is clarified by means of bhindi, lime or saji. Generally we do it with saji.

President—What is that?

Mr. Gupta—It is a kind of sodium carbonate mostly. You can have a sample, if you like, from this place. Then boiling begins. When the third pan begins to boil, the clarifying agents are put into it and the scum is removed. Then that part of the juice is removed to the lower pan and it continues to boil. Then it is taken to the fifth pan and when it begins to strike it is let down to the cooling pans where it is allowed to cool for a few minutes.

President—What does 'strike' mean exactly?

Mr. Gupta—When it has got sufficiently thick to settle down into crystals. Then it is stirred by means of a cup attached to a handle so that it might cool down rapidly and then put into pots.

President—That is the massecuite which goes into the centrifugal?

Mr. Gupta—Yes, that is *rab*.

President—That goes into the centrifugal and there the sugar is taken out and what is left is molasses. What do you do with your molasses?

Mr. Gupta—It is mostly used for curing tobacco and in distilleries.

President—You also make these molasses into inferior *gur*?

Mr. Gupta—It has just begun in three areas, Shahjahanpur, Meerut and Bareilly.

President—How exactly is that done?

Mr. Gupta—There is another Bel of three pans. The molasses is boiled again and if we want to improve the quality we just put in a little fresh juice when boiling. This is a very good quality and can compare favourably with first *gur*.

President—That fetches a good price does it?

Mr. Gupta—The point is that so far as appearance goes it is all right, but it has not got the same flavour.

President—What is that *gur* used for?

Mr. Gupta—It is eaten by the poor people.

President—What sort of price does that command?

Mr. Gupta—I am afraid I cannot give you an exact figure.

President—Mr. Clarke could tell us, I suppose?

Mr. Gupta—Yes. It is mainly manufactured in Shahjahanpur district and Munda is the place where it is made mainly.

President—The prosperity of your division depends very largely on the price of imported sugar?

Mr. Gupta—It does

President—This sugar which is manufactured here in this way has a local market I suppose?

Mr. Gupta—No. It is mostly sent to Rajasthan, Punjab, Sind and Benares.

President—You say it is sold both locally and in mandies. What are 'mandies'?

Mr. Gupta—It is a central place where the gur or sugar or any other merchandise is sent and people take it from there. My sugar is mostly sent to Shahdara near Delhi and from that place it is taken to Rajasthan, Punjab and other places.

Dr. Matthan—How exactly does your sugar compare in appearance with mill made sugar?

Mr. Gupta—It is not quite as white.

Dr. Matthan—Is it more like brown sugar?

Mr. Gupta—No. It is whiter. But it stands better with sweetmeat makers. People from these sides come to our side and purchase our sugar for the best quality of sweetmeats.

President—Because it is sweeter?

Mr. Gupta—Yes.

Dr. Matthan—Does the bulk of your demand come from sweetmeat makers?

Mr. Gupta—Yes, it is also used in tea.

Dr. Matthan—There is more of your sugar used for sweetmeat making than for direct consumption?

Mr. Gupta—It is turned into *bhuro* and is used in milk and tea. It is also made into sugarcandy.

Dr. Matthan—What about your molasses? Are your molasses better than mill made molasses?

Mr. Gupta—I can't give you an idea because I have not compared the two.

Dr. Matthan—I have a sort of idea that since your extraction of sugar is very much less probably there is a good deal more sucrose in your molasses. What I am trying to get at is, are your molasses on that account likely to be preferred? I suppose in curing tobacco you require better classes of molasses?

Mr. Gupta—No. For curing tobacco a thick quality is needed, if it is of two years standing it is liked better.

Dr. Matthan—Your own impression is that your molasses fetches a better price than the other molasses?

Mr. Gupta—Yes.

President—What is boiled molasses?

Mr. Gupta—By boiled molasses, I mean, that the man who sold it to another *khaddar*, did the boiling for *2nd rab*.

President—The figure that you give is rather a special price. You got Rs. 2.8?

Mr. Gupta—I got Rs. 2.8 only this year otherwise for the last two or three years I had it in my store. It was only cleared last year.

President—Supposing imported sugar fetched at Calcutta Rs. 10 per maund for that sugar to compete with your sugar it has got to come up a good way by rail. When it came to your market it would probably be sold at Rs. 11.10 so that you would always have an advantage over imported sugar to that extent. You are asking for a stabilized price of Rs. 12. I am trying to translate that into terms of imported sugar at Calcutta. First of all you have a freight advantage and then you have a certain sentimental advantage.

Mr Gupta—That is wearing out now. Of course owing to the present movement there might be some sentiment against foreign sugar.

Dr Matthai—Practically your Rs 12 a maund would mean 10-8 in Calcutta.

President—You state here that the price you got is Rs 11-8?

Mr Gupta—It was last year.

President—At that time Java sugar was selling in Calcutta at about Rs 9 so that you actually got an advantage of Rs 2-8 a maund?

Mr Gupta—Yes.

President—If we were to arrange that the price of sugar in Calcutta should be Rs 10 it would mean that you would be getting about Rs 12?

Mr Gupta—I can't quite follow you but all that I mean is that we should have the price of Java sugar in the upcountry market at Rs 12.

President—When the price in the upcountry market was Rs 11-8 last year the price in Calcutta was Rs 9 so that if we fixed the price at Rs 10, it would give you Rs 12-8 here.

Mr Gupta—Supposing it was Rs 10 in Calcutta it would mean Rs 11-11 in the upcountry market.

President—I am calculating from the figures you have given us. You say last year sugar was sold at Rs 11-8, the price in Calcutta at that time was about Rs 9, so that you got Rs 2-8 a maund more than Calcutta. Therefore if we fix the price at Rs 10 you would get Rs 12-8.

Mr Gupta—Rs 11-8 is exactly the price as it was sold at Shahdara and this does not include the freight.

Mr Rahimtoola—Was it Java sugar?

Mr Gupta—No, our sugar.

President—What was the freight?

Mr Gupta—I think it is something like 10 annas from our place to Shahdara.

President—Is that shown anywhere in your figures?

Mr Gupta—No.

President—That must come out of your profit of Rs 1-4?

Mr Gupta—Yes. That is why I have said in the end that it does not include any overhead charges.

President—Rs 10 would mean probably a price of Rs 11-8 net?

Mr Gupta—Yes.

Dr Matthai—What you want to get is Rs 12 is the price of white sugar at Lahore?

Mr Gupta—No, at Cawnpore.

President—Why do you send to Cawnpore?

Mr Gupta—Cawnpore is the Central market and most of the pioneer agencies are in Cawnpore.

Dr Matthai—Which is your main market?

Mr Gupta—Chandauli, Bareilly, Benares, Hathras, Delhi and Shahdara.

Dr Matthai—Which do you consider the most important of your markets?

Mr Gupta—I send most of it to a *mandi* near Aligarh, Shahdara and Hathras. Then sometimes I send to Benares.

President—You have different markets?

Mr Gupta—Yes. We have to look for markets where there is a certain amount of prejudice against Java sugar.

President—How do you pack your sugar?

Mr. Gupta —We pack it in double gunny bags and we get back our bags which however are not used for a second time, because the railways do not allow us to do so.

President —What do you do with them?

Mr. Gupta —We utilise them for packing wheat and if they are torn we use them as covering for our cattle.

Mr. Rahimtoola —What is the objection of the railway people?

Mr. Gupta —They say it might be damaged in transit.

Mr. Rahimtoola —Do you use second-hand gunny bags?

Mr. Gupta —No. We use fresh gunny bags otherwise the railway company do not accept at their risk.

President —In Benares do you get a higher price for your sugar than imported sugar?

Mr. Gupta —Yes, a bit higher, say about a rupee or a little more than a rupee a maund.

President —What other places are there where you would get preference of that sort?

Mr. Gupta —In Rajasthan there is a big temple in Udaipur owning an estate with an income of Rs. 80 lakhs a year and there several maunds of this sugar is consumed daily.

President —So that you get a certain amount of premium for your sugar but you cannot say how much?

Mr. Gupta —No. We have to look round for markets. A few years back we could send to fixed markets but now we cannot do that and we have to look for markets where we can get a better price. We send samples and then sell our sugar to markets where we command a good price.

President —Mr. Clarke gives us the idea that for those factories which manufacture white sugar as well as sugar by this process which you were speaking of just now a price of somewhere between Rs. 11 and 12 per maund for sugar would be satisfactory. Is that correct?

Mr. Gupta —Of course if second grade fetches a little better price.

President —What about the improved kinds of cane? Is there a big acreage in your district under Coimbatore cane?

Mr. Gupta —I can tell you of one Pargana, that is my own Pargana. There are 12 running farms of 100 acres with tube wells. If you go about my villages I can show you that almost all the cultivators have taken to this improved variety, but with my help. I supplied them cane seed free because I purchase that cane. I gave them various facilities. I taught them how to use the improved kind of manure and I supplied them at times with water. I helped them in sowing and in various other operations. But this sort of cultivation needs more money and unless he is paid more for his cane he cannot do it.

President —Your experience is that without personal demonstration and encouragement cultivators are rather slow in taking to improved varieties of cane?

Mr. Gupta —If they are paid well they won't be slow. This is an exceptional help I gave to these cultivators.

Dr. Matthai —Taking the sugarcane grown by the members of your Association as a whole roughly what proportion do you think is under improved cane?

Mr. Gupta —We don't have the indigenous variety at all now.

Dr. Matthai —Entirely Coimbatore canes?

Mr. Gupta —Yes. The Javr variety is going out of cultivation now.

Dr. Matthai —Which is the most popular variety?

Mr. Gupta —From the cultivators' point of view Co. 213 and from our point of view Co. 219.

Dr. Matthai—In one case where you give the cost of cultivation you give a figure of 800 maunds per acre. Is that at all a normal yield under improved cane?

Mr. Gupta—That is in my farm. That is for the entire area of 84 acres.

President—That is with intensive cultivation I suppose with manure and so on?

Mr. Gupta—Yes, and with tube well water.

President—What manure do you use?

Mr. Gupta—Not only farmyard manure, but we purchase castor cakes, oil cake sulphate of ammonia, amophos, lunophos and various other fertilizers. On our side particularly within an area of 10 miles there are over 18 farms so we cannot get enough farmyard manure.

Dr. Matthai—Do you get any assistance in these matters from the Director of Agriculture?

Mr. Gupta—Yes, a lot of it.

Dr. Matthai—And your Association acts as a sort of intermediary between the Agricultural Department and the individual grower?

Mr. Gupta—Yes.

President—Do you have any demonstration plots, with sets given to you by the Agricultural Department? Is there any system of subsidizing the seedlings?

Mr. Gupta—They have done it. In many cases they have given Rs. 3,000 as a free grant and in return they want various kinds of improved varieties of seeds so that they can utilize those seeds for the tenants in the locality.

President—[see you give the cost of cane in two farms as between 0.3.9 and 0.4.6 that may be considered I suppose as the cost of cane with improved varieties when the cultivation is undertaken by an enlightened cultivator?

Mr. Gupta—Yes. 0.3.9 was the cost under my own supervision.

President—What would the ordinary cultivator's cost be?

Mr. Gupta—I think it would be really more than that and I have just pointed out why. He would be putting everything into it. He would be putting labour into it, he would be putting water into it, but not enough of manure and he cannot put enough manure because manure means money and he has not got it. Manure has cost me Rs. 2,877 for 84 acres and in a case where intensive cultivation is carried on for a number of years, a lot of money is needed which a small cultivator cannot put into it. Even if he is going to borrow, he cannot do that because he does not get a good price for his cane.

Dr. Matthai—Does he spend the same amount on irrigation as the other man does? That is to say is there any difference as regards the irrigation expenses?

Mr. Gupta—Yes there is a difference because we have tube wells. He has got his own mud well and lifts water with the help of cattle.

President—This is not under canal irrigation?

Mr. Gupta—No, this is tube well irrigation.

President—Mr. Clarke puts it at about As. 5 a maund.

Mr. Gupta—Not exactly As. 5. We can take As. 4.6.

President—If the cost of producing cane is As. 4.6, As. 8 per maund would be fairly remunerative.

Mr. Gupta—Yes.

President—That would leave As. 3.6 profit. He would get about 300 maunds of cane to the acre. That would be Rs. 66 more.

Mr Gupta—Yes, Rs 66 more

President—That would not be considered excessive?

Mr Gupta—No

President—You consider that that would be a reasonable profit for the risks he undertakes?

Mr Gupta—Yes

President—Sometimes he gets bad crops?

Mr Gupta—Yes

President—In this enquiry on which we are engaged you think we should not be concerned primarily with the welfare of the big central factories so much as with the welfare of the agriculturists?

Mr Gupta—And growers

President—If we were to try and arrange that the cultivator at any rate to start with was getting an all round rate of As 8, that would be satisfactory from the point of view of the cultivator?

Mr Gupta—Yes

President—That would be sufficient to induce the cultivator to bring his cane to a central factory?

Mr Gupta—I think so

Dr Matthai—As far as you are concerned the grower who deals with you that is to say, who gives the juice and gets in return a price which is equivalent to As 8 per maund of sugarcane realises practically the whole of the surplus. Whereas in the case of a mill which gets its supplies of cane through a contractor though the price of sugarcane per maund delivered at the factory is As 8 yet the amount which the cultivator actually realises will be considerably less

Mr Gupta—Yes

Dr Matthai—What I am trying to get is this supposing we suggest that a fair price delivered at the factory whether it is a *khandani* factory or a mill, is As 8, the actual position of the grower will be much better under the *khandani* system than under a mill, because there will be a saving of the middleman's charges

Mr Gupta—Yes I am sure after some time the cultivator himself would get rid of the indigenous manufacture of white sugar, because under the *Hidi* system he is trying to find out a way in which the capital outlay may be much less. In that case it might be possible for two or three cultivators combined together to have a small power mill and a small centrifugal mill and manage their own plantation

President—In your district what about communications? Are there many roads and railways?

Mr Gupta—There are roads and railways, but not enough

President—We were told by some of the representatives of big factories in Cawnpore that the construction of a central factory anywhere in the Rohilkhand Division is almost out of the question, because they could not get their cane in either by road or by rail and they could not send their sugar out. Would you agree with that opinion?

Mr Gupta—I don't follow you

President—There are very few roads and the railways are not plentiful either and so it is difficult to secure the establishment of a central factory

Mr Gupta—They are not plentiful. The case of Bilari is quite different. There are so many tube wells and so many big farms of 100 acres each that there is a possibility for indigenous manufacturers to have a central factory. I think as the communications become better and at the same time the unproved varieties are sown, the indigenous manufacturers may set up a factory at various places

President—If, in the meantime, the price of sugar is not sufficiently high to keep the *thandasis* working, the cultivation of sugarcane would go down?

Mr. Gupta—It must

Dr. Matthai—Are both the *ef* farms your farms for which you have given the costs here?

Mr. Gupta—No. The other is the Court of Wards Farms

Dr. Matthai—Is that run by the Department?

Mr. Gupta—No. The department has deputed a Manager

Dr. Matthai—Then the cost of cultivation is slightly higher

Mr. Gupta—Yes

Dr. Matthai—Why is it slightly higher?

Mr. Gupta—Here the land is not so good

Dr. Matthai—Does the difference come mainly under manure?

Mr. Gupta—Not exactly in the manure. The land is not so good. Besides there is some difference between personal supervision and supervision through an engaged man.

Dr. Matthai—It is rather a considerable difference

Mr. Gupta—Yes

Dr. Matthai—It is Rs 4.8 in the one case and Rs 8.9 in another. I suppose it would really be under manuring and irrigation if it is the land that makes the difference

Mr. Gupta—More manure should have been put there

Dr. Matthai—Do you know whether it is the same kind of cane grown in both places?

Mr. Gupta—Yes

Dr. Matthai—Co 218?

Mr. Gupta—Yes and Co 219

President—Apart from your own knowledge of your district, could you tell me from what parts of the United Provinces *gur* is exported? For instance we hear that a good deal of Bombay Presidency is supplied by the United Provinces and Punjab

Mr. Gupta—From the Meerut side and Muzaffarnagar

President—Have you got any idea as to what it costs to send *gur* from Meerut to Bombay?

Mr. Gupta—Freight you mean?

President—Yes

Mr. Gupta—Probably it is the same as with sugar

President—41 pie per mile?

Mr. Gupta—The rate is very nearly the same. A member of the Sugar Committee was telling me—I do not know whether it is the exact figure—that the price of wheat and *gur* being the same the freight is 4 times that of wheat

Mr. Rahimtoola—For all *gur*?

Mr. Gupta—Yes

President—It would work out to something like Rs 2 a maund?

Mr. Gupta—I should think so

President—If *gur* was selling in Bombay at Rs 7 it would have to be selling in Meerut for Rs 5 to make the export profitable

Mr. Gupta—It is less than that in Meerut

President—What is the price there now?

Mr. Gupta—Rs 1 and Rs 4.8

President —Is that wholesale?

Mr Gupta —Yes

President —Is that best eating gur?

Mr Gupta —Yes

President —Mr Clarke gives some figures regarding the price of gur. He has given three markets, Cawnpore, Agra and Fyzabad. Which of these would be eating gur centres?

Mr Gupta —Agra and Fyzabad

President —Cawnpore would probably be refining gur?

Mr Gupta —Yes

President —In the case of Agra it would be eating gur?

Mr Gupta —Yes and Fyzabad

President —Then he gives the following prices —

1930	Agra			Fyzabad		
	Rs	A	P	Rs	A	P
Mid January	6	8	0	5	4	0
Mid February	5	13	0	5	12	0
Mid March	6	0	0	5	12	0
Mid April	6	10	0	5	4	0

Mr Gupta —What about Meerut?

President —He doesn't say anything about Meerut

Mr Gupta —I know about Meerut and I don't know about other places.

Dr Matthai —Are Meerut prices higher?

Mr Gupta —They are lower

Dr Matthai —You say Rs 4 to Rs 4-8?

Mr Gupta —Yes

Dr Matthai —Have you got recent prices for Meerut?

Mr Gupta —I can send you if you want

President —Could you send us prices for Meerut?

Mr Gupta —Yes. A friend of mine is investigating into the prices of gur

President —That is the biggest market for eating gur in the United Provinces?

Mr Gupta —Yes

President —Please send us prices for the last three years for the first four months of each year

Mr Gupta —Yes

President —Because in Meerut direction I see from Mr Clarke's letter the percentage of Coimbatore canes grown is very large

Mr Gupta —Yes in Meerut Division

President —In Meerut 27 per cent of the total area is under the improved sugarcane. Muzaffarnagar is in the same direction

Mr Gupta —Yes

President —That is 41 per cent. Mostly improved canes are grown in Rohilkhand

Mr Gupta —Yes

President —Why is that?

Mr Gupta —It is due to the Agricultural Department

Dr Matthai —Is Shahjahanpur in Rohilkhand Division?

Mr Gupta —Yes

Dr Matthai—Can you tell us the difference between your process and the Hadi Process?

Mr Gupta—Yes

Dr Matthai—What precisely is the difference?

Mr Gupta—I have just told you all about my process. In our process there are about 5 pans. In Hadi process there are 7 pans in one bel and 3 in the other and they are smaller. As regards the number of pans he can put 7, 5 or even 12. They are flat bottomed while in our case they are hemispherical.

Dr Matthai—They are smaller pans?

Mr Gupta—Yes, in the case of Hadi.

Dr Matthai—And they are flat bottomed?

Mr Gupta—Yes and they are thinner. They are not so heavy as ours. What he has been trying to do is to hasten the process of boiling and minimise charring.

Dr Matthai—That is to say economy in fuel consumption?

Mr Gupta—No. He wants the least inversion. In the bigger bel where there are 5 or 7 pans, only boiling takes place and then from the last pan it is let into the auxiliary bel with three pans only. In that the upper pan is flat bottomed and the lower two are hemispherical. They are thick and heavy. Now the chief difference lies in the lowest-striking-pan. In our case the pans cannot be removed. So when we let out the finished juice, a certain amount of burning takes place and that causes inversion and charring. In the case of the Hadi bel there is a small pan which can just be removed by hand. So when the juice reaches a certain consistency the boiler just removes it, puts it aside, removes the finished rab from it, puts it into the cooling pans and then puts another charge from the 2nd pan and then puts it on the furnace.

President—He cuts off the fire when he takes off the pan?

Mr Gupta—No, it is a small thing which can be removed.

Dr Matthai—It can be emptied?

Mr Gupta—Yes.

Dr Matthai—Taking the quantity of sugar that you get and the quality of it, how do the two systems differ?

Mr Gupta—So far Mr Hadi has been claiming that his system is better, but it has got to be tried.

Dr Matthai—Have you no direct knowledge?

Mr Gupta—I have direct knowledge. I went to Bhopal and saw everything. I have pressed it before the Sugar Committee.

Dr Matthai—What is your impression?

Mr Gupta—My impression is that it is better.

Dr Matthai—It is better in the sense that there is a higher extraction and it is also a better quality sugar?

Mr Gupta—Yes.

President—He gets 8½ per cent sugar?

Mr Gupta—Yes.

President—That of course is very good if the quality of the cane is the same as in Rohilkhand.

Mr Gupta—Yes.

President—Is that being introduced largely in Rohilkhand?

Mr Gupta—It is not yet introduced. It may be introduced next year when it is officially known that it is actually better.

President—They are going to make the comparison in Moradabad under the auspices of the Imperial Council?

Mr Gupta—Yes in my place.

Dr. Matthai—Has this been fairly widely adopted?

Mr. Gupta—No

Dr. Matthai—It is still in the experimental stage?

Mr. Gupta—Yes, it has never been tried on any commercial scale

President—It has been tested by the experts of the Imperial Council?

Mr. Gupta—Yes, it is going to be tested. There would be a chemist and everything

Mr. Rahimtoola—The President wants to know whether the representative of the Imperial Council accompanied you to Bhopal

Mr. Gupta—I went with him, Mr. Shri, myself and Mr. Fatehuddin of the Punjab

President—Those were experiments only and they were not conducted on a commercial scale?

Mr. Gupta—I don't think they were done on a commercial scale

President—All you can say is that at present the results are hopeful?

Mr. Gupta—Yes, I am quite hopeful about it

Dr. Matthai—What about the capital expenditure? Does that require more capital?

Mr. Gupta—No. In our case the boiling pans cost about Rs. 700. In his case it costs about Rs. 300

President—Why is that?

Mr. Gupta—They are not so heavy and the pans are very much smaller and thinner

Dr. Matthai—If his claim is justified that he can get over 8 per cent of sugar against your 3½ or 4 per cent, considering also the difference in capital expenditure it is a big difference

Mr. Gupta—Yes. I think that the cultivators might take to it

Dr. Matthai—That might give a much longer lease of life to *khandsari* sugar?

Mr. Gupta—Not that. As soon as a chance occurs for a central factory, he cannot survive. Even at this stage we are thinking of a small sugar factory at Bilari

Dr. Matthai—Giving up the *khandsari*?

Mr. Gupta—Yes, because there are so many facilities in that

Dr. Matthai—Assuming that protection is granted to the sugar industry and a price of say Rs. 10 or somewhere about that is guaranteed for sugar in Calcutta, what do you consider to be the future of *khandsari* sugar? Is it likely to be replaced?

Mr. Gupta—I think that it would be replaced by the central factory

Dr. Matthai—Would you regret it from any standpoint?

Mr. Gupta—No

President—How long do you think it would take to replace the *khandsari* system?

Mr. Gupta—I think that it would not take more than 10 or 12 years. I don't mean to say that it would be possible to replace it in all the places. Even Java has not been able to do that

Dr. Matthai—Supposing protection was, for example, continued for 15 years, at the end of that period, practically all the *khandsari* sugar would be replaced?

Mr. Gupta—I would not say all, but the bulk of it would have been replaced. But there are areas in U. P. where the cost in the improvement of communication may be very high

Dr. Matthai—There is of course this question of communications. If communications are not developed in your area, all the cane grown in that would be more conveniently made into *khandsari* sugar

Mr Gupta —Yes, more especially if we could have 8 per cent according to Hadi's plant

Dr Matthai —Even if protection is granted for a long period, pending the development of communications and the introduction of Hadi's improved process, *khandhari* sugar may survive much longer than you think?

Mr Gupta —It may

Dr Matthai —That would be an economic argument for encouraging *khandhari* sugar in places where communications are not developed because that is the only way in which sugar can be made

Mr Gupta —Yes

Dr Matthai —In your representation where you give the cost of production for one maund of sugar as Rs 10-4, you say that the balance left is only Rs 1-4 per maund. Your suggestion is that covers the balance?

Mr Gupta —It does not cover

Dr Matthai —Can you give us some kind of data for estimating what the overhead and enterpriseness charges are likely to be in the case of a typical *khandhari*?

Mr Gupta —That is always my difficulty. I have thought over it and have come to certain figures

Dr Matthai —Can you consider the matter and send us a note?

Mr Gupta —Yes

President —And the average freight if any for taking the sugar into the market?

Mr Gupta —Yes,

Mr Rahimtoola —You say in your representation "Thus an increase in the price of foreign sugar so as to maintain the prices at Rs 12 per maund by means of protection is the only method to help the industry in its building." Are you aware that at present the price in Calcutta is Rs 8-5?

Mr Gupta —Yes

Mr Rahimtoola —According to you, the freight would be Rs 1-10 to Cawnpore?

Mr Gupta —Yes, it comes to Rs 9-15

Mr Rahimtoola —Therefore it comes to about Rs 10

Mr Gupta —Yes

Mr Rahimtoola —You think that there should be a further increase of Rs 2 in the duty? According to your calculations you want the duty to be increased by Rs 2

Mr Gupta —I have never calculated from that point of view

Mr Rahimtoola —You have made a statement in writing that an increase in the price of foreign sugar so as to maintain the price at Rs 12 per maund by means of protection is the only method to help the industry in its building. I am telling you that the price which is at present current in the Calcutta market is Rs 8-5. You have said that Rs 1-10 is the freight to Cawnpore. That means Rs 10. Therefore you want a further increase of Rs 2 in the duty in order to build up the industry?

Mr Gupta —Yes

Mr Rahimtoola —Is that your idea?

Mr Gupta —Yes

Mr Rahimtoola —What is the period that you think would be required to bring about a state of affairs when no protection would be necessary?

Mr Gupta —Between 10 and 12 years

Mr Rahimtoola —You think that the sugar industry has satisfied all the conditions laid down by the Fiscal Commission?

Mr Gupta —I think so

Mr. Rahimtoola—Have you read paragraph 97 of the report of the Fiscal Commission wherein three conditions have been laid down?

Mr. Gupta—What are those three conditions?

Mr. Rahimtoola—I shall just tell you. The first condition is that the industry must be one possessing natural advantages such as an abundant supply of raw material.

Mr. Gupta—An abundant supply of raw material is exported.

Mr. Rahimtoola—Then there must be cheap power, a sufficient supply of labour and a large home market.

Mr. Gupta—There is a sufficient supply of cheap labour and the home market is large.

Mr. Rahimtoola—The second condition is that the industry must be one which without the help of protection either is not likely to develop at all or is not likely to develop so rapidly as is desirable in the interests of the country.

Mr. Gupta—The sugar industry fulfils that condition.

Mr. Rahimtoola—The third condition is that the industry must be one which will eventually be able to face world competition without protection.

Mr. Gupta—When the output per acre is doubled as we expect it could be it would be able to face world competition. As I have said, in my case, the yield is 800 mounds. It is not under ideal conditions. This year I am trying to control 50 acres of cane with just one tube well. I am trying to find out how we can reduce the cost of production, but unfortunately there has been no rain for the last three months and my experiment has not been much of a success. Yet, I am quite hopeful about the future of the industry.

Mr. Rahimtoola—You think that within 12 years it will be able to face world competition without protection?

Mr. Gupta—Yes, if the cultivator's share is sufficiently safeguarded.

Mr. Rahimtoola—What do you mean? Will you just tell me what you mean by fixation of price? What method would you suggest to the Tariff Board for the protection of the cultivator?

Mr. Gupta—The price should be fixed mostly for the central factories. If the price is fixed for the indigenous sugar manufacturer, there is one point to be taken into consideration. Whenever money is advanced, the cultivator gets a low price and that somehow must be stopped. I cannot suggest any method for that.

Dr. Matthai—That is a matter of financing?

Mr. Gupta—Yes.

President—What do you think of co-operative societies?

Mr. Gupta—They have already failed. They want honest workers.

Dr. Matthai—Is that your considered opinion?

Mr. Gupta—That is my opinion. Unless we have men who could work in the interests of the country and not in the interests of their pockets, the result cannot be otherwise.

Dr. Matthai—If protection is granted and the Agricultural Department of the United Provinces and the Co-operative Department by working together form a strong co-operative society of cane growers so that they may be able to bargain effectively with the factories, is that likely to help the growers?

Mr. Gupta—I have told you my experience about it. They would advance money this year. Next year they would take Rs. 50,000 from Government. They won't realise a single pie. They will say that the money has already been advanced and show a part of current year's grant as money realised.

Mr. Rahimtoola—You have told us at the beginning that you intend to include tenants also as members of your Association?

Mr Gupta —Yes

Mr Rahimtoola —Will they enjoy the same privileges?

Mr Gupta —Yes

Mr Rahimtoola —There will be no conflict of interests?

Mr Gupta —Not at all

Mr Rahimtoola —You have already knowledge of the Sugar Committee which made a report in 1920?

Mr Gupta —Yes

Mr Rahimtoola —Can you tell me how many recommendations have been accepted or put into effect in your province since that report was published?

Mr Gupta —I don't remember

Mr Rahimtoola —Will you consider and let us know whether any effect was given by your Government to the recommendations of the Sugar Committee and whether any substantial results have been achieved by the cultivators?

Mr Gupta —I don't think that any effect was given to their recommendations because the Government waited for the Royal Commission's report and afterwards another Sugar Committee has been appointed

Dr Mathur —Then there is this Tariff Board enquiry?

Mr Gupta —Yes The conditions have much changed The change may be due to the vigorous work of the Agricultural Department or to the sympathy of the Government or to the fact that the cultivator has no cash crop other than sugarcane What we find is that conditions have much changed The area under the improved varieties of sugarcane has gone up very much and people are already taking great interest The educated classes also are taking interests, because they are not finding any employment As I say, it may be due to unemployment and various other causes

Mr Rahimtoola —Do you know that molasses is imported into India?

Mr Gupta —I cannot say about this year Last year there were imports of molasses

Mr Rahimtoola —I take it that molasses is not imported this year?

Mr Gupta —I have no knowledge

BEHAR PLANTERS' CANE GROWERS' ASSOCIATION, MOTIHARI

Oral Evidence of Mr E C DANBY, Chairman, and Mr W W M
MURRAY, recorded at Pusa, on Saturday, the 25th
October, 1930

President—Gentlemen, you represent the Behar Planters Cane Growers' Association?

Mr Danby—Yes

President—Are you both planters?

Mr Danby—Yes

President—Do you own considerable estates?

Mr Danby—Yes

President—Could you give us the approximate acreage?

Mr Danby—I grow 400 acres of cane a year

President—What is the total acreage of your Estate?

Mr Danby—About 2,500 acres

President—And yours Mr Murray?

Mr Murray—My total acreage is about 1,400 acres and I grow 100 acres of cane

President—Do you both grow Coimbatore varieties?

Mr Danby—We grow Co 213, 210 and 214

Mr Murray—I grow Co 213 and 214

President—You don't grow any of the local varieties?

Mr Murray—No

President—What is your outturn per acre from Coimbatore canes I suppose you keep your rough cost accounts

Mr Danby—Yes You mean of my own estate?

President—Yes

Mr Danby—An average of 100 maunds an acre That would not be for the inputs

President—Taking 27 maunds a ton, it will be 15 tons

Mr Danby—Yes

President—What is your average outturn from your farm?

Mr Murray—The average outturn of my own estate would be approximately the same

President—Are you using steam tractors?

Mr Danby—No We are using motor tractors

President—Not steam tackle?

Mr Danby—No, not entirely motor tractors either We use bullock ploughs as well

President—What is the approximate cost of cultivation per acre under these conditions?

Mr Danby—Everything?

President—Yes

Mr Danby—About Rs 100 an acre

President—I suppose it would be more expensive for you to cultivate than the ordinary input

Mr. Danby—Yes I spend more than they do, and I get a better return

President—Apart from the question of return, you have to pay for the labour you use whereas the agriculturist uses his own labour which cannot be assessed at a higher value than if he were to hire out his labour to you

Mr. Danby—That is so

President—Approximately your costs would be Rs 4 a maund?

Mr. Danby—Yes

President—Would it be as much as on the average Rs 1½? What is your own estimate of cost?

Mr. Danby—Rs 4½ to Rs 5 a maund

President—Mr. Henderson gave us a general idea of the cost. He said somewhere about Rs 1½. Do you think that this cost is susceptible of any reduction at all?

Mr. Danby—The tendency is rather to increase. The only reduction in costs recently has been in the cost of oil cake

Dr. Matthai—Has there been a considerable reduction in the cost of oil cake?

Mr. Danby—Not a considerable reduction. There is a reduction now after I had contracted for my estate for next year

President—Where do you sell your canes?

Mr. Danby—To the Samastipur Central Sugar Factory

President—Do they pay for it at the factory or at your farm?

Mr. Danby—I have to deliver at the weighbridge of the railway station

President—How far is that from your farm?

Mr. Danby—1½ miles

President—They pay all expenses in?

Mr. Danby—They pay the railway freight and they pay us for the cartage

President—What does the cartage come to?

Mr. Danby—They pay 2 pie a maund per mile

President—Have you any idea of the freight?

Mr. Danby—No

President—What is the distance?

Mr. Danby—By rail it is 18 miles

President—Have you got a contract with the Samastipur Company?

Mr. Danby—Yes

President—What is the rate?

Mr. Danby—They pay Rs 5 a maund for 213 and 210 and they pay 7-8 a maund for 214

President—That is because of the higher sucrose content?

Mr. Danby—We don't get such a big yield from it. They crush that early in the year

President—That is in order to increase their working season?

Mr. Danby—Yes

Dr. Matthai—What time of the year do they start?

Mr. Danby—They start by about the middle of November. 214 is generally finished by about the 15th December. That is our contract. We have to deliver the whole of our 214 canes before the 15th December and then they start on 210. After 210 is finished, they begin to crush 213

President—Is there any fixed scale of payment? Do these rates vary?

Mr. Danby—That is the minimum price. This 5 annas is on the price of sugar

President—Plus half an anna on the price of sugar?

Mr Danby—Yes

Dr Matthai—This As 5 is the minimum price?

Mr Danby—Yes

Dr Matthai—The sliding scale that they generally adopt is half an anna plus half an anna for every rupee in the price of sugar per maund in Calcutta?

Mr Danby—Yes

Dr Matthai—As 5½ is including cartage?

Mr Danby—No

Dr Matthai—If you take Rs 9 as the price of sugar per maund in Calcutta, then on that scale the price will be As 1½ plus half an anna or As 5, so that this is rather higher

Mr Danby—This is the minimum price. In our original contract it was As 1½ and afterwards it was altered to As 5

President—The difference between As 5½ and As 7-3 represents some kind of bonus which they offer for 214?

Mr Danby—Yes

President—Does that apply only to you?

Mr Danby—To all the growers who have a contract with the mill. They have made it a condition that they would give us As 1-0 premium provided we grow 20 per cent of our cultivation with 214

Dr Matthai—Supposing you delivered 214 in January, would you get that price?

Mr Danby—We don't get that premium. We only get that on 214 if it is delivered before the 15th December. If we deliver it after the 15th December, they allow us a certain percentage for seed and so on, otherwise we don't get any premium for the cane delivered after the 15th December

Dr Matthai—When they give you advances, the advances are recovered in the price?

Mr Danby—They don't give us advances

President—In your representation you say that cane has not caught on as a cash crop and has not taken the place of such crops as chillies and tobacco. Is there any reason to suppose that the area under cane is decreasing?

Mr Danby—No, I don't think it is decreasing. One of the reasons is that the prices of tobacco and chillies have both fallen tremendously in the last two years and some of the raiyats who have not grown cane before have started to grow it as an alternative

President—There are a certain number of cane factories here which take a certain amount of cane, if the raiyats put down any considerable areas would it have to be utilised for gur making? Would the factories be able to take any more?

Mr Danby—I don't think that is the position in Samastipur, because the Samastipur mill is chiefly supplied by European planters and when their contract expires in two years time, I don't think the planters will go on growing the cane at the present prices

President—That is the position?

Mr Danby—It doesn't pay the planters to grow the cane at the price they are receiving. When the contract expires, the mill will want cane from the Indian growers

Dr Matthai—Can you give us an approximate idea of the sort of price which you consider a fair price?

Mr Danby—I think that anything over As 8 a maund would be profitable to the raiyat

Dr Matthai—That is to say a minimum of As 8?

Mr Danby—Yes Cane is in the ground for two years From the time we start furrowing our land till the time we cut the crop it is approximately two years

President—So that two years rent must be allowed?

Mr Danby—Yes

President—You have given us your own estimate of the costs of cultivation What would be the cost of cultivation of an ordinary raiyat? I suppose you may take his output at about 300 maunds an acre?

Mr Danby—That is the maximum I doubt whether that will be the average

President—Mr Henderson gave that is a rough average for the whole of the province Would you put the average of an ordinary cultivator at 300 maunds?

Mr Danby—250 to 275 maunds to an acre

President—What would you put the cultivation cost of the raiyat at?

Mr Danby—Charging for his own labour for the work he puts in and his family I should put it at Rs 60 to Rs 70 an acre

Dr Matthai—That again comes to roughly As 4½ taking an average yield of 250 maunds

Mr Danby—Yes To that has to be added the rent for two years

President—This Rs 60 is exclusive of rent?

Mr Danby—Yes

President—What would you put the rent at?

Mr Danby—It varies tremendously all over Bihar I think a fair average would be Rs 5 an acre

President—That would be Rs 10 That comes to Rs 70

Mr Danby—Yes

Dr Matthai—That brings it to As 4-10 This cost of Rs 100 which you have given on a yield of 100 maunds does not cover the interest on capital on things of that kind?

Mr Danby—No

Dr Matthai—Taking your actual expenses of cultivation it comes to As 1½ a maund

Mr Danby—Yes

Dr Matthai—On Rs 100 you get an average yield of 400 maunds Supposing we add to that a fair amount for your overheads and for your interest on capital, what approximately would be the fair price?

Mr Danby—It is rather difficult to say I think that As 8 a maund or anything over As 8 a maund would be a fair price for the cane I am taking what I can make from other crops that I can grow

President—That is the price which would induce people to lay down cane?

Mr Danby—Yes At the present time I am only growing cane, because I am under contract and I have got to do so At the time I was making a contract, I was receiving a better price for the cane At the present time I can do better with other crops than cane If I received As 8 a maund, I think I would grow cane

President—What crops could you substitute for cane?

Mr Danby—Oats, indigo and wheat

President—Would that give you a better return?

Mr Danby—It would give me more than I am getting for the cane, because the cost is not so high I will get my money within a year, whereas in the case of cane it is not so

President—At the present price of wheat, will it pay you?

Mr Danby—What I received last year for my wheat would give me a better return

Dr Matthai—Would it be possible for you to give us some data showing the relative returns from these various crops? The point is this. If we are to find out what is the sort of price at which a factory can count on getting a continuous supply of cane, according to you that figure would be at least 8 annas a maund?

Mr Danby—Yes

Dr Matthai—We have got to establish in our report that 8 annas is the price which the factory has to pay to get its supply of cane

Mr Danby—Yes

Dr Matthai—Can you give us any kind of data? Could you give us the returns that you are likely to get from your other crops as compared with sugarcane—some detailed figures—to show that anything short of 8 annas would not be worth while?

Mr Danby—Taking oats, I grow a large acre of oats. In an ordinary year I expect to get a return of 25 maunds an acre and I sell my oats at Rs 4 a maund

President—That means you will be getting Rs 100

Mr Danby—Yes, I also get a crop of maize in the field

President—In the same acre?

Mr Danby—Yes

President—What do you sell your maize at? First of all how many maunds of maize do you get?

Mr Danby—15 maunds

President—What is the price?

Mr Danby—Rs 2 per maund. That is Rs 30

President—In one year you get Rs 150?

Mr Danby—Yes

President—In two years you will get Rs 260

Mr Danby—Yes

President—As against that, in two years you get one crop of sugarcane which at 8 annas a maund would give you Rs 200

Mr Danby—Yes

President—That is what it comes to. So that normally it is better for you to grow maize and oats than sugarcane?

Mr Danby—We have to have a rotation

President—Is sugarcane necessary for your rotation?

Mr Danby—No

President—You can cut it out altogether?

Mr Danby—We can

President—After growing sugarcane you get a very much better out-turn of oats, wheat or whatever you may grow?

Mr Danby—We have the benefit of manure we put for the cane. I think that cane is a good rotation crop

President—The return which you get from your cane is Rs 200 and from your oats and maize you get a return of Rs 260

Mr Murray—You have to take off the cost of cultivation from Rs 200

President—What does that come to?

Mr Murray—I should like to point out the advantage of cane growing, that is, the certain market. If one grows oats or any other crops, he does so with the risk of getting a market and not knowing what the market is going to be. If cane is stabilised at a minimum price, then at the time

of planting one would know what to expect at the time of harvesting. That is an attraction if the price is stabilised.

President—That is a distinct point. As regards cost, what would you put down the cost of growing oats per acre at?

Mr. Murray—Oats only?

President—Oats and maize including rent if any?

Mr. Murray—Rs. 33-6. That allows for no manure.

President—That will be Rs. 66 for two years?

Mr. Murray—Yes.

President—Out of Rs. 200, you will be making a profit of roughly Rs. 200?

Mr. Murray—Yes, for the two years.

President—As against a profit of Rs. 100 on sugarcane, assuming that you get a price of 8 annas a maund?

Dr. Matthai—That is to say if you are to be absolutely on the same footing in regard to sugarcane as in regard to oats and maize you will have to get a price of somewhere about 12 annas a maund?

Mr. Danby—We shall have to work it out.

President—On these figures in two years you will get Rs. 200 from the sale of maize and oats.

Mr. Danby—Yes.

President—Your cost of cultivation each year would be Rs. 33. That will be Rs. 66 in two years which would leave a profit of Rs. 134. In order to get a surplus of Rs. 101 from sugarcane you will have to get a gross price for 400 maunds of Rs. 101 plus Rs. 100 which is the cost of cultivation, that is Rs. 201. So, if you divide Rs. 201 by 100, you would get a price of between 11 and 12 annas per maund.

Mr. Murray—There is something I want to point out in this connection and it is this. One cannot go on growing these crops continually without manuring. After cane, the benefit of manure is carried on to some extent and it might cover these two crops. After that, one would certainly have to manure again. You cannot have any sort of rotation without manure and that is not included here. In making a comparison of that sort it certainly ought to be included—at least some part of it.

Dr. Matthai—You have to make some allowance for the fact that you have to go in for extra manuring?

Mr. Murray—Yes.

Dr. Matthai—In addition to that, for sugarcane you have a sure market whereas in regard to these, the market may not be quite so certain and you have to make allowance for that also.

Mr. Murray—In fact to make a comparison of that sort it would be better, I think, to take some other crop than oats because the latter is a highly specialised crop. If the rajputs were to grow oats there would be no margin. There is only a small market amongst race horse owners. If the rajputs were to take to growing oats, there would be no market.

Dr. Matthai—What would be a more representative kind of crop?

Mr. Danby—Barley, pulses, etc. Those are the things which the rajputs grow.

Dr. Matthai—In my case it brings out the point that as far as you are concerned a price of at least 8 annas a maund is necessary for making sugarcane worth while for you?

Mr. Danby—We have to grow crops in rotation. We cannot always grow a crop which pays us best.

President—In this calculation as regards the cost of cultivation of oats and maize I suppose at some time or other you would have to allow the land to lie fallow?

Mr. Danby—We will have to have rotation

President—With rotation can you go on without letting the land lie fallow at all?

Mr. Danby—For instance if we grow oats first, then we grow tobacco and chillies. In that case, it is not necessary to let the land lie fallow. Otherwise, if we are to grow sugarcane, it will be necessary

President—If you eliminate cane altogether you might have to allow your land to lie fallow for a year occasionally once in five years?

Mr. Danby—Yes. After the cane is cut in November or December that land is fallow until next June when we grow maize

President—In other words the growing of cane is a matter of importance in agricultural economics?

Mr. Danby—Yes

President—You take that into consideration when you say that probably the price of 8 annas a maund for cane would be a satisfactory price from your point of view?

Mr. Danby—Yes

Dr. Matthai—Would it be possible for you afterwards to give us a more detailed statement showing the relative profits of cane and other crops? You might take some really representative crop?

Mr. Murray—We would be able to do that

Dr. Matthai—If you could send it to us later on, it would be useful to us

Mr. Murray—Yes

President—If the price is not sufficient why do not the raiyats stop growing? Are they under any agreement?

Mr. Danby—No

President—Then, why do they not stop growing sugarcane altogether? I suppose they are getting $5\frac{1}{2}$ annas for it?

Mr. Danby—Yes, they are getting the same price

President—Is it due to their conservatism?

Mr. Danby—In those parts—in the Samastipur area—I don't think that cane has taken on very much with the raiyats

Mr. Murray—Cane has definitely not taken on with the raiyats

President—Cane has not decreased?

Mr. Murray—No. When the Samastipur mill was started 12 years ago, their idea was to get a guarantee from the European planters to supply them with canes in the first instance and then during that period their idea was to encourage the Indian growers (raiayats) to grow cane. In that we might say quite definitely that they have failed. They have tried by giving advances and in every other way they can, but they have failed

Dr. Matthai—Is there much production of gur in this area?

Mr. Murray—Very little. There is no gur market on this side of the river that I know of

Mr. Danby—In parts of Bihar—in Darbhanga for instance, where the raiyats do grow a good deal of cane, they are given advances by the company. Cane is also a cash crop for them. But in those parts a great deal of tobacco and chillies are grown

Mr. Murray—We find that cane is grown rather more largely in lands which are not suitable for chillies or tobacco

President—They always have a small area under cane partly as a question of rotation and partly in order to secure a certain amount of cash and they continue to grow that area with cane but they have not extended it as a result of the establishment of mills?

Mr. Murray—Certainly that is the position

Mr Danby—They certainly increased the area when the Combaote varieties were first introduced. After that, they have not increased the area any further.

President—To bring about a considerable increase a higher rate would be required?

Mr Danby—Yes.

President—Something like 8 annas?

Mr Danby—Yes.

President—Then it would come to 10 annas per maund for the mill to land it at the factory?

Mr Murray—It should not cost the factory two annas more. It seems to me a very high rate. I do not know what arrangements they have with the railway company. I do not know what they have to pay for freight. But I think that 2 annas would be very high.

President—Supposing we take the rate of 3 pice per maund per mile, it is not a very high rate.

Dr Mathur—I suppose the likelihood would be a fixed station to station rate?

Mr Danby—I think they have special arrangements with the railway company.

President—Is there a special station to station rate?

Mr Danby—Yes.

President—Half an anna for these 18 miles from your place to the factory would not be unreasonable?

Mr Danby—I am on the outside border of the Samastipur area. Some of the cane is carried direct by the bullock cart to the factory.

President—Supposing we said that they should pay 8 annas a maund, they would still be expected to pay this additional 2 annas for 214?

Mr Danby—I don't think that any one would grow that unless they pay this premium.

President—Over and above the eight annas?

Mr Danby—Yes, otherwise nobody would grow it because the yield is so much less.

President—The yield is not so good?

Mr Danby—No.

President—That would mean a rate of 8 annas a maund for all the other canes and something like 10½ annas for Co 214 which the mills would have to pay?

Mr Danby—Yes, if they wish us to grow it.

Mr Murray—The difference between 214 and 218 is probably a difference of 150 to 200 maunds on an average. The difference in outturn which is obtained by the growers is a big one. We get quite a good lot less out of Co 214.

President—So far as unirrigated cane is concerned, that is, the cane which is grown in North Bihar, there does not seem to be much prospect for the sugar industry.

Mr Danby—Do you mean apart from the unirrigated cane?

President—Apart from the irrigated. This is for the unirrigated cane. If you take an all round rate of 8 annas which probably with concessions and special rates for special canes would mean 9 annas a maund delivered at the factory, and if you take an outturn of 9 maunds of sugar per 100 maunds of cane, that is 11 maunds of cane for 1 maund of sugar, for your cane only you would be paying 99 annas which would be about Rs 8-9 per maund of sugar for cane only before you come to the cost of manufacture, which would mean that you would not be able to put your sugar at much less than Rs 10-8 a maund on the market as against a price of

roughly Rs 4 a maund in Calcutta without duty for the imported stuff. That would mean a difference of Rs 6 a maund between the imported sugar and the Indian manufactured sugar. As I understand that there is very little prospect, at any rate in the unirrigated lands, of the cost of production of sugarcane going down it does seem to me that the future is not very bright. It would of course be possible by introducing protective duties to carry on, but whatever protective duty is put on, it will be required presumably for all time because there is no prospect of the costs coming down.

Mr Danby—But there would be a chance for the Indian grower.

Mr Murray—The Indian grower is at present not so efficient as the European, but I think he will be able to improve his output.

President—He will never have tractors.

Mr Murray—If he made money he would be putting more manure.

Dr Matthai—You don't expect in the best of conditions ryots raising more than 800 maunds at any time, do you?

Mr Murray—They might. I have seen that average in other parts of India, but possibly not in Bihar with the present canes anyhow.

President—In the irrigated areas the prospects of a reduction in costs are fairly considerable because with suitable canes and intensive cultivation it might be possible to get a very much larger crop than is obtained at present.

Mr Murray—Almost double.

President—Speaking generally it seems to me that the prospects of sugar manufacture in the irrigated areas are better than in the unirrigated areas.

Mr Danby—Yes.

President—Have you any views on that particular point?

Mr Danby—I have not done any irrigated cane. It is impossible to irrigate here.

President—Do you consider there is any possibility of new factories starting up in this direction with advantage to the cultivator and so on?

Mr Danby—Not in this particular area.

Dr Matthai—In North Bihar I suppose there is very little room for expansion?

Mr Danby—I do not think in parts of North Bihar where they grow tobacco and chillies the ryots will agree to grow cane but further north of Champaran and Muzaffarpur if the mills were nearer they would grow cane.

President—When does your agreement expire?

Mr Murray—We have three more crops to grow.

President—You have given notice.

Mr Danby—We have not given notice.

Dr Matthai—For how many years was this contract?

Mr Danby—15 years.

President—Have the mills approached you at all?

Mr Danby—They have asked us whether we shall be prepared to renew the contract and we have replied that we would think of it if suitable terms were offered.

President—You don't know what the company will do if you don't renew your agreement?

Mr Danby—We believe they have been trying to make themselves independent of us by encouraging Indian cultivators to grow cane but I think they have failed.

Mr Murray—I am myself a shareholder in the mill and I am rather afraid that in the course of a few years they will not get cane.

President—So that the terms are in your hands so far as this mill is concerned?

Mr. Danby—In a way. We would like to like to growing cane if they give us a fair rate. We don't want to give up growing cane. It is a good rotation crop and our indigo is very difficult to sell now.

Dr. Matthai—Supposing we decided to recommend protection for sugar and decided to stabilize white sugar in Calcutta at somewhere about Rs 10-8 a maund so as to make it worth while for factories to pay 8 annas for their sugarcane and we left it at that, in the circumstances could you depend on getting that price from the factories without some kind of compulsory regulation?

Mr. Danby—No. We are afraid if protection is given unless there is some legislation growers would not get a fair share of the benefit.

Dr. Matthai—If you take this particular area where it is impossible to attempt any considerable extension of sugarcane, a factory here must get its cane from you so that you are in a position of some advantage as regards bargaining.

Mr. Danby—I don't think we are. I know of cases where mills are close to each other where riots have been able to demand 2 to 3 annas more than we have been paid and companies have paid them because there has been competition between the mills.

Dr. Matthai—What area is that?

Mr. Danby—Murhowah and Parhiakhi in the Saran district.

President—It has been suggested that some sort of licensing system should be introduced under which zones should be fixed for each factory and no other factory should be allowed to establish itself or purchase cane in this particular zone. I suppose that sort of proposal would not appeal to you?

Mr. Murray—Not without some special legislation to protect the grower, otherwise he will be in hands of one mill and all competition will be done away with.

Dr. Matthai—You might be better off without contracts, wouldn't you?

Mr. Danby—Contracts were made in the beginning because it was not originally a cane growing country and until they got a certain guarantee for their supply of cane they could not put up a mill.

Dr. Matthai—Supposing the Sugar industry was protected and it was worth while for them to ensure a continuous supply of cane at some higher price than now, then would it not be better for you to bargain for the price of cane each time instead of tying yourselves down by contracts for 10 or 15 years?

Mr. Danby—If the scale was worked out on a fair basis I think it would be advantageous to have contracts rather than to have to bargain every year.

President—If you bargain every year the factories might just say "we don't want your cane."

Mr. Danby—We must know before we put down the cane whether the mill is going to take it. We have got 400 acres and we have got to sell to the mill whereas the small grower can make his own gur.

Dr. Matthai—I take it that the terms of your contract when renewed would depend on the price of sugar under the scheme of protection?

Mr. Danby—Exactly.

President—What sort of legislation would you contemplate as regards the rate?

Mr. Murray—My idea on that subject is that no protection should be given without special legislation and that legislation should be based on the market value of sugar with a guaranteed minimum price on a sliding scale. I have been told that legislation of that kind exists in Cuba.

So I presume that something of that sort, if it has been of benefit there, can be introduced in this country

President—At the present moment Cuba is getting a price which does not enable her to carry on at all

Mr. Danby—Then the sliding scale that was arranged was not sufficient

Dr. Matthai—That sliding scale does not work in the present depressed condition

Mr. Danby—A minimum was not fixed I suppose

Dr. Matthai—That minimum is perfectly uneconomic. How would you regard the sliding scale which was suggested by the Indian Sugar Committee under present conditions? They suggested in 1920 that on their sliding scale cane should be paid for at a price equal to half the value of the sugar manufactured from it. If you take the extraction percentage at 9 and Rs. 10 a maund of sugar the price of cane would be between 7 and 8 annas a maund

Mr. Murray—That appears to be somewhat near our figure. So long as it works out to what we consider is a minimum it is all right, but it does not quite work to our minimum of 8 annas

Dr. Matthai—If it is Rs. 10 per maund of sugar you get on the Bihar scale $5\frac{1}{2}$ annas whereas on this scale you get $7\frac{1}{2}$ annas

Mr. Murray—At the time the Bihar scale was made it was fair but at the moment it is not fair. At the time it was made out the average extraction was 6 to 7 per cent, now it is 9 per cent

Dr. Matthai—At the time the Sugar Committee reported the average was somewhere about 7 to 8 per cent. With the improvements that have taken place in the efficiency of the factories the sliding scale of the Sugar Committee works on the whole fairly for the grower with the present extraction

Mr. Murray—Then we may consider that as right, but I should not like to leave the standpoint that the minimum ought to be 8 annas

Dr. Matthai—They suggested a minimum of 8 annas in those days. The sliding scale the Sugar Committee suggested was based on the Cuban and Louisiana practice

President—Your idea is that some sort of legislation should be introduced that As. 8 should be paid. Provincial legislation would perhaps be necessary because As. 8 could not be made applicable to all India. For instance in parts of Madras you could not get sugarcane under As. 12. In Bombay it is very difficult to get sugarcane under As. 10

Mr. Danby—How can they afford to pay in Madras and Bombay?

Dr. Matthai—They have got to pay, because otherwise it is impossible to carry on

President—Messrs. Parry and Company have manufactured sugar from date palm jaggery which is a good deal cheaper than the ordinary *gur* and they only use cane direct to a limited extent and they grow a certain amount themselves. Their cost is well over a rupee. In the Deccan area the only sugar factory, Belapur Company, grow their own sugarcane. They don't buy at all

Dr. Matthai—It is very difficult by means of legislation to ensure that the grower gets what we consider a fair price. It is very difficult to devise or to enforce that kind of legislation

Mr. Murray—Without it we feel quite certain that the grower—I am not considering the European grower especially, but considering the *riyats* more—will never get more than a pittance of the profit. They will never get a fair share. They will only get a pittance

Dr. Matthai—In making our recommendations to the Government we may suggest that all the sugar factories in India should send in periodical returns to Government giving their extraction percentage, their total output and the price they have paid for cane and we make a strong recommenda-

tion that in fixing the price for cane, factories under the protective scheme should as far as possible adhere to the sliding scale suggested by the Sugar Committee of 1920? In any case where the price falls short of the sliding scale it would be open to Government at any rate to administer a warning to the factory concerned

President—Supposing we introduce a provision of this sort in the protective Bill that the Governor General in Council may make rules regulating the price at which sugarcane should be purchased by the factories in each province. If that was introduced it would be all right in dealing with the big planters. Supposing one of these factories happened to make a certain number of enemies, it is not at all impossible this regulation would form a means by which they might be indefinitely harassed. Case after case might be brought up against them. It would be from the factories point of view an almost impossible position. The conditions are rather different here from the Cuba. In Cuba the *colonos* are fairly substantial people growing considerable areas of cane. Whereas here a factory may be quite glad to buy cane from a man who has only 5 acres of cane or even less.

Mr. Murray—In this country we Europeans can protect ourselves in any scheme of protection, but the growers (natives) are unable to protect themselves. They have no organisation. Nowdays the factories are combining. There is already a combine. I think they have an Association which is practically composed of millers. They will certainly in time to come combine and have the natives at their mercy.

President—I see the difficulties there. The only thing that I can see from the point of view of the grower it is this: first of all he has the alternative to some extent at any rate of making his cane into gum and secondly that if a good many factories start, he might be able to sell it to different factories.

Mr. Danby—If they manufacture sugar at a guaranteed price, for a certain number of years, it would not be possible to fix a minimum price. Those factories will have to pay the minimum price if they get the license from the Government.

President—If you take the first part of your statement I don't see how any definite price for sugar could be guaranteed to manufacturers over a series of years. You might give them so much protection. Could you guarantee that they are going to get Rs. 10 a maund? I see great difficulty in devising a scheme of that sort.

Dr. Matthei—In order to bring the price up to Rs. 10.8 from where it stands now Rs. 8.8, you suggest an additional duty of Rs. 2 next year, but Java might cut their price by a rupee or Rs. 1.8.

Mr. Danby—I quite realise the difficulty.

President—On the other hand there may be a sudden system of restriction decided on by Java and Cuba and the price may rise. You would be definitely against this licensed zone suggestion? The suggestion is that every sugar factory should be licensed by Government before it starts and a certain area allotted to it and within that area no fresh factory should be licensed so that the factory would have all the cultivators in that area at its mercy. Mr. Wynne Sayer claims that the factories will thus be able to develop the cultivation of sugarcane in that area by seeing that the agriculturists used the best kind of seeds, most suitable variety of cane by providing cheap manures and by sending round people to inspect their crops.

Mr. Murray—I don't think that that would be to the advantage of the grower.

President—You think that it would not be to the advantage of the grower?

Mr. Murray—No, unless some legislation is made to protect the grower.

President—You would press that any system of reservation of zones for separate factories should be accompanied by a system of legislation which should also ensure that the grower obtains a definite price for his cane?

Mr Danby—Yes

President—You press that point strongly?

Mr Danby—Yes

President—Do you think that a price of Rs 8 per maund of cane would be accompanied by a considerable expansion in the growing of sugarcane in North Bihar?

Mr Danby—I think it would

President—Do you think it would be possible for the present area to be doubled if a suitable price was arranged?

Mr Murray—In my part of the world I am quite certain that the increase would be much more than double. That is in South Dhahanga. As regards northern districts I think it would increase, but I am not certain of the amount.

President—There is no irrigated cane here at all?

Mr Danby—Bogg Sutherland have some at Daulatpur. It belongs to the Bogg Sutherland Company, Managing Agents of the Samastipur Sugar Company.

President—Which Company is responsible for the cultivation?

Mr Danby—Samastipur Central Sugar Company.

President—Who is the Manager in charge?

Mr Danby—Mr Atkins.

President—If we get the costs of cultivation from Samastipur factory, they would be mainly based on that particular farm?

Mr Murray—Yes.

President—That is all irrigated?

Mr Murray—This year I have irrigated some cane, but only a small area.

President—Did you get a better return?

Mr Murray—Yes, I tided my crop over a bad period.

President—What sort of difference do you think irrigation makes in the output? You say 300 maunds an acre for unirrigated.

Mr Murray—You can certainly get 400 maunds. If you put in sufficient manure you might get 450 maunds.

President—For the province as a whole, Mr Henderson gave us 300 maunds for the unirrigated and 500 for irrigated.

Mr Murray—It is not very far off from my calculation.

Dr Matkar—Taking the expenses of cultivation and setting against that the increase in the yield, by how much will you reduce the cost of cane?

Mr Danby—According to the accounts published by the Samastipur Company, the capital cost of the irrigation scheme on the Daulatpur Estate was Rs 40,000.

Mr Murray—That included several mistakes.

President—Such as?

Mr Murray—One mistake was the building of a big bund and an attempt to carry the water in pipes which cost them a lot of money.

President—What do you think the scheme could be carried through for?

Mr Murray—It should have been carried through for Rs 15,000—certainly not more.

MESSRS. CAREW AND COMPANY, LIMITED

**Oral Evidence of Mr MARSHALL and Mr WHYMPER, recorded
at Calcutta, on Monday the 27th January, 1930**

Mr Mathias — Do you represent Messrs Carew & Co ?

Mr Marshall — Yes

Mr Mathias — Where are your factories situated ?

Mr Marshall — One at Asansol, one at Rosa and one at Katui

Mr Mathias — Is your factory at Asansol the biggest ?

Mr Marshall — Yes

Mr Mathias — At present you are producing about 61,000 bulk gallons

Mr Marshall — Yes

Mr Mathias — I don't know what proof that will be ?

Mr Marshall — Overproof

Mr Mathias — What overproof would it be ?

Mr Marshall — It is about 60 or 65 overproof

Mr Mathias — What is it mainly used for ?

Mr Marshall — Sometimes we sell it to the shellac manufacturers, or varnish manufacturers or people who make paints, etc. They also burn a lot of it. We do not know exactly where it is going to. We generally sell in bulk.

Mr Mathias — Where do you sell it mainly ?

Mr Marshall — In Calcutta

Mr Mathias — Where does it mostly go to ?

Mr Marshall — Mostly Calcutta. Calcutta is the place where there is a big shellac factory.

Mr Mathias — You say that it varies from 60 to 67 overproof

Mr Whympere — Yes

Mr Mathias — I am told by the shellac manufacturers that anything below 61 overproof is not really much use

Mr Whympere — That is so

Mr Marshall — We had a contract in 1928-29. We had also a contract in 1923-24 and 1924-25

Mr Mathias — In 1928-29, it was a very low figure,

Mr Marshall — Yes, but they were satisfied with the quality. We were supplying Angelo's with over 61. We specially prepared for them

Mr Mathias — The Triffin Valuation of molasses is Rs 2 10 per cwt

Mr Marshall — Yes

Mr Mathias — The duty would be 10½ annas per cwt

Mr Marshall — Yes

Mr Mathias — You manufacture about 3½ gallons of methylated spirit per cwt of molasses

Mr Marshall — 3 97 gallons London proof gallons per maund or 3 bulk gallons per cwt

Mr Mathias — We have been given 3 5 gallons in one of the representations. I do not know what you have given here exactly. 1 cwt of liquid molasses will produce 3 bulk gallons

Mr Marshall — Yes

Mr Mathias — It has been variously given from 3 to 3½ by different manufacturers. That depends on whether it is liquid or whether it is hard molasses

Mr Marshall — On hard molasses we get a better outturn

Mr Mathias — In the Tariff Schedule it is stated " Molasses (i) imported in bulk by tank steamer—Rs 2 10, (ii) otherwise imported Rs 3-2 The former is liquid molasses

Mr Marshall — Yes

Mr Mathias — Assuming that $3\frac{1}{4}$ bulk gallons are produced from 1 cwt the incidence of the duty will be 3 annas

Mr Marshall — We calculated 3 34 annas

Mr Mathias — We will take your calculation Messrs Parry & Co gave us 3 5 annas Taking your calculations it comes to 3 34 annas

Mr Marshall — Yes

Mr Mathias — Methylated spirit has a tariff valuation of Rs 1-1 or 17 annas The duty is $7\frac{1}{4}$ per cent that is 1 25 annas

Mr Marshall — Yes

Mr Mathias — So, the difference is roughly 2 annas, is it not?

Mr Marshall — Yes

Mr Mathias — So that on your showing the duty on methylated spirit would have to be increased to 22 per cent to give tariff equality

Mr Marshall — Yes

Mr Mathias — Your first suggestion was that the duty on molasses should be reduced

Mr Marshall — Yes

Mr Mathias — That would be a reduction of how much?

Mr Marshall — 10 per cent Our original application said 10 per cent If the tariff valuation was increased it would be 10 per cent

Mr Mathias — The difficulty that occurred to us in that respect was that the reduction of duty on molasses would encourage the import and discourage sugar manufacture and at the present moment I understand from the press that the sugar industry is not in very good position

Mr Marshall — We also have a sugar factory We are also interested in sugar

Mr Mathias — Are you sugar growers?

Mr Marshall — No We buy sugarcane and extract sugar

Mr Mathias — Would any reduction in the duty on molasses be passed in course of time to the agriculturist?

Mr Marshall — I don't know that it would Most of the places where we can get country molasses are a long way from Asansol and we never could handle country molasses as cheaply as we would the Java molasses

Mr Mathias — Molasses are used for the manufacture of methylated spirit

Mr Marshall — Yes

Mr Mathias — It is only at Asansol that you manufacture methylated spirit at present and no molasses are obtainable there?

Mr Marshall — No, they all come from Bihar and the United Provinces

Mr Mathias — Which are your other factories?

Mr Marshall — At Rosa (U P) where we have a combined factory and at Katni (C P)

Mr Mathias — Katni would not probably be affected to any great extent

Mr Marshall — We never use molasses there at all

Mr Mathias — There you use Mhowa

Mr Marshall — Yes

Mr Mathias — So far as Rosa is concerned?

Mr Marshall — We use molasses, our own molasses We have surplus molasses when we make sugar We use some ourselves and whatever surplus is left over we sell We find that we could never get a good price for the

country molasses. The price of Java molasses has gone up but it has not increased the price of the country molasses.

Mr Mathias—As regards your Rosa factory supposing the duty was reduced on imported molasses, would you import molasses there?

Mr Marshall—It would not pay us to do so because of the freight. The freight is very high.

Mr Mathias—Your case so far as the import duty is concerned is that any reduction in the import duty would not affect the agriculturists.

Mr Marshall—I don't think so. They are too far away. We can never use country molasses and the quantity of molasses used by distillers for distillation is small as compared with the other purposes for which molasses is used. But we do not know the exact proportions.

Mr Mathias—Your proposal is that the duty should be reduced on molasses imported for distillation.

Mr Marshall—Yes.

Mr Mathias—That is to say it would be a concession to the companies engaged in that particular work.

Mr Marshall—Yes, to the distillers. But we would like to have the duty raised on methylated spirit.

Mr Mathias—As well?

Mr Marshall—Instead of the reduction of the duty on molasses we would like to have the duty increased on spirit.

Mr Mathias—The duty on molasses could be reduced without injuriously affecting the agriculturist or the sugar industry.

Mr Marshall—I think so.

Mr Mathias—As regards the alternative proposal, viz, the duty on methylated spirit, Messrs Angelo Bros represented that it would affect their trade very adversely.

Mr Marshall—They make shellac.

Mr Mathias—They use about 86,000 gallons.

Mr Marshall—They use big quantities.

Mr Mathias—An increase of one anna a gallon which would be the result of increasing the duty from 7½ per cent to 15 per cent would be something like Rs 5,000 to them. They say that they would not be able to pass that on to the consumer because the price that they get does not depend on the cost of manufacture.

Mr Whymper—They are the only manufacturers of shellac who use methylated spirit. They have no competitors. I don't think that Rs 5,000 would make any difference to them.

Mr Mathias—That is the case that was presented to us. Their point is this. The price at which they sell their shellac does not in any way affect the cost of manufacture. Sometimes they sell it at a profit and sometimes at a loss.

Mr Marshall—Yes, I deal in it myself.

Mr Mathias—This would be a sort of permanent increase in their cost of manufacture which they would not be able to pass on to the consumer.

Mr Marshall—The additional cost is only Rs 5,000. They make about 70,000 maunds of lac every year. The total expenditure is Rs 7 to Rs 8 lakhs.

Mr Mathias—Can you give me any idea of the profit per maund which the shellac industry is making?

Mr Marshall—The average price they sell at is about Rs 85. Most of their shellac is sold at about Rs 70. I don't think that Rs 5,000 would make much difference to them, because it forms such a small percentage on their total expenditure.

Mr. Mathias — The same argument might be applied to the manufacturers of methylated spirit. You manufacture about 60,000 gallons a year. You want to get one anna extra for every one rupee which would come to Rs 5,000. This amount could be passed on to the manufacturers of shellac.

Mr. Marshall — Yes.

Mr. Mathias — Another aspect of the case which has been brought to our notice is this. At present I understand that although in the Trust Schedule the imported spirit has a tariff valuation of Rs 1-1, Messrs Angelo Bros are obtaining it at considerably less for the manufacture of shellac.

Mr. Marshall — The tariff valuation of Rs 1-1 includes the denaturants. Messrs Angelo Bros buy their spirit at 15 annas and add their own denaturants.

Mr. Mathias — Your quotation last year to Messrs Angelo Bros, did that include denaturants?

Mr. Marshall — That is for pure spirit. They gave the denaturants to add.

Mr. Mathias — What was your last quotation? I suppose they called for tenders.

Mr. Marshall — Yes. I think that it was 15 annas 6 pies.

Mr. Mathias — What about this year?

Mr. Marshall — We did not trouble to tender because we could not quote a competitive price. The price of molasses is rising.

Mr. Mathias — I understand that your tender was Rs 1-2 5.

Mr. Marshall — We never meant it seriously.

Mr. Mathias — It was never meant seriously.

Mr. Marshall — No, because we know that we could not compete.

Mr. Mathias — Part of their case was that the difference between your tender this year and the price at which they obtained their spirit was so large that even an increase of $7\frac{1}{2}$ per cent in the duty would not really do you any good at all.

Mr. Marshall — This year the price of molasses has gone up. But I don't expect that it is likely to stay there permanently.

Mr. Mathias — The price of molasses has gone up.

Mr. Marshall — Yes.

Mr. Mathias — What is the reason for that?

Mr. Marshall — I don't know what it is.

Mr. Mathias — Because sugar is down.

Mr. Marshall — Yes. But I think the real reason is that simply they have got a monopoly in the supply of molasses.

Mr. Mathias — That was suggested to us by Messrs Parry & Co.

Mr. Marshall — Yes, that is the case.

Mr. Mathias — Is not there some trust?

Mr. Marshall — Yes, there is.

Mr. Mathias — Is there any reason to suppose that they would not be able to keep up the monopoly and maintain the price at a higher level?

Mr. Wympsey — It is a question of time. If the price of molasses continued to remain at this high level, then the price of spirit also would go up.

Mr. Mathias — Do they control the price of molasses in Java?

Mr. Marshall — Yes.

Mr. Mathias — Your contention is that if the prices were normal on the one hand you would be able, by a small addition to the duty, to compete with the imported spirit.

Mr. Marshall — We think so.

Mr. Mathias — On the other hand if the prices remained at this level, it is almost certain that with the price of imported molasses, the price of spirit also would go up.

Mr Marshall —It is bound to

Mr Mathias —In that case, a small duty would help you

Mr Marshall —Yes

Mr Mathias —What about your costs of production? Can you give me any idea as to what your costs are?

Mr Marshall —About 8 annas. That methylated spirit as we explained is more or less a by-product. All we want to do is to sell it and if possible recover something towards our overhead charges.

Mr Mathias —I don't think that we asked for your costs of production. I might explain that the costs of production are only relevant in this enquiry to the extent that it is necessary to show that the relief asked would be of some assistance to the industry.

Mr Marshall —Yes

Mr Mathias —So, I don't want to go into details.

Mr Marshall —On the figures we gave for 1927-28, the cost of methylated spirit including the duty would come to Re 1-0-2 per gallon and without the duty 11 annas per gallon.

Mr Mathias —What is your manufacturing cost?

Mr Marshall —With duty, it is Re 1-0-2.

Mr Marshall —That is on the production of 1927-28.

Mr Mathias —That was on a very small production, was it not?

Mr Marshall —Yes.

Mr Mathias —Then of course this would come down very largely if you were producing considerable quantities.

Mr Marshall —It would.

Mr Mathias —Charges like, rent, taxes, travelling expense and so on, managing agency allowance, all these would come down. If you were producing say even a lakh of gallons a year it would be nearer 8 annas than 14 annas.

Mr Marshall —Yes, if we can reduce the price of our methylated spirit by working our distillery at full capacity. We wanted to produce methylated as a sort of by-product.

Mr Mathias —You have rectified spirit and methylated spirit?

Mr Marshall —Yes. This is the total of your overhead expenditure?

Mr Marshall —Yes.

Mr Mathias —You include in your overhead all your establishment?

Mr Marshall —Yes.

Mr Mathias —In our system of cost accounting we take the works establishment as part of the works cost. What do you actually include in your works cost?

Mr Whymper —Manufacturing cost includes everything except the cost of raw material.

Mr Mathias —What is the process? Is it the process to make rectified spirit first and then the methylated spirit?

Mr Whymper —That is what we have at present. We work the rectified spirit and then we re-distil it again for the limited amount of methylated spirit we are selling now.

Mr Mathias —Is that the usual method of manufacture?

Mr Whymper —We are manufacturing at present on these lines but if the consumption went up we should have to manufacture methylated spirit direct from the raw material.

Mr Mathias —That would be cheaper I suppose?

Mr Whymper —No, it would be more expensive.

Mr Mathias —Why?

Mr. Whymper — Because the foreshots and tailings obtained from the manufacture of rectified spirit are now used for the manufacture of methylated spirit which is treated at present as a by-product and priced accordingly. If it was manufactured direct from the raw material it would naturally cost us more to produce.

Mr. Mathias — If you had sale for it, would it be better to manufacture methylated spirit direct instead of manufacturing it from rectified spirit?

Mr. Whymper — Yes.

Mr. Mathias — Have you made any enquiries or estimates of the possible extent of the market for methylated spirit?

Mr. Marshall — I think roughly about 10 lakhs of gallons are imported into India. It is increasing every year.

Mr. Mathias — If there is a market why don't you make a bid for it?

Mr. Marshall — We have tried but we can never compete because the price is up against us.

Mr. Mathias — That is because you adopt this method of manufacturing methylated spirit from rectified spirit.

Mr. Marshall — That is the existing method because we have very small sale of methylated spirit. We were producing direct in 1921-25 but it did not pay us.

Mr. Mathias — What was the reason?

Mr. Marshall — At that time the price of methylated spirit was very high. The price of Java spirit was somewhere about Rs. 1-5 to Rs. 1-9. We reduced our price to Rs. 1 and had to give up manufacturing direct because that price did not pay us.

Mr. Mathias — You could not compete at one rupee?

Mr. Marshall — We were simply cut down. We reduced our price for a time, then they reduced theirs and cut the ground under our feet.

Mr. Mathias — Do you think this tariff equality would enable you to compete?

Mr. Marshall — With the normal price of spirit it would.

Mr. Mathias — If you get this tariff equality would you produce on a large scale?

Mr. Marshall — Yes, unless they still cut down to the lowest price.

Mr. Mathias — Do you manufacture much rectified spirit?

Mr. Marshall — Yes. We manufacture about a lakh of gallons.

Mr. Mathias — That you dispose of mainly to chemists?

Mr. Marshall — Yes.

Mr. Mathias — You say you regard this methylated spirit as a by-product?

Mr. Marshall — Yes, we want to get rid of the weak spirit.

Mr. Mathias — You have the plant, I suppose, for producing methylated spirit from the raw material direct?

Mr. Marshall — Yes.

Mr. Mathias — About your Roza works, is that near Cawnpore?

Mr. Marshall — That is near Shahjahanpur.

Mr. Mathias — Do you manufacture any methylated spirit there?

Mr. Marshall — No, there the cost of production is higher but we might try in the future.

Mr. Mathias — I was wondering whether it would not pay you to supply the upcountry markets.

Mr. Marshall — We never seriously tried that.

Mr. Mathias — You were saying just now that you cannot at present use all your molasses there. You have to sell some of the molasses in the market so that it does seem to me that possibly you might manufacture methylated spirit there.

Mr Marshall —We might in the future We have a spare still

Mr Mathias —You purchase your sugarcane there in the open market, do you not?

Mr Marshall —We advance 50 per cent of the money to the agriculturists for their crop and we have an agreement with these people that they will sell the sugarcane to us

Mr Mathias —How much molasses do you put on the market roughly per year?

Mr Marshall —Last year I think we sold 10,000 to 15 000 maunds of molasses

Mr Mathias —You are quite positive on the point that imported molasses could under no circumstances compete in that market, are you not?

Mr Marshall —I am quite certain of that We are looking to the future We make a lot of spirit for drinking purposes but every day it is getting less and less and we must have on our hands something else to turn to and the only thing that there is is methylated spirit

SUGAR BUREAU, PUSA

**Oral Evidence of Mr WYNNE SAYER, Secretary, Sugar Bureau,
recorded at Pusa on Monday, the 24th November, 1930**

President—Mr Wynne Sayer, you have been in charge of the Sugar Bureau for how long?

Mr Wynne Sayer—Nearly 11 years

President—And you were a member of the Sugar Committee?

Mr Wynne Sayer—Yes

President—So that you have personal knowledge of the costs of the Sugar Industry in India since the Sugar Committee reported?

Mr Wynne Sayer—Even before that I was put on special duty for nearly 6 months before the Sugar Committee was constituted to collect materials

President—So that you have a good general practical knowledge of the Sugar Industry in India, say, for the last 12 years

Mr Wynne Sayer—Yes

President—As regards the question of cost of production in Java, you have given that on page 5 of your Note to the Government of India under the heading "Dumping of sugar in India—Java costs"

Mr Wynne Sayer—Yes

President—Are these figures which you have obtained from Messrs Fraser Eaton and Company for 1927-28?

Mr Wynne Sayer—Yes These are reliable figures Since then Pinson Geerlign and others have produced some figures for the League of Nations but I have not dealt in any way with those figures

President—Those are 1926 figures?

Mr Wynne Sayer—Yes

President—So that your figures are later figures?

Mr Wynne Sayer—Yes

President—As regards the cost of production in Java, I take it that 1 quintal is equal to 100 kilograms

Mr Wynne Sayer—Yes

President—You say Whites—Rs 159—and Browns—Rs 3-18 0 I do not know how you got the price for Brown Sugar

Mr Wynne Sayer—The price of Browns is less by 1 guilder 20 cents than that of whites

President—I do not quite follow how you have worked out Rs 450 for White on the cost of production per quintal excluding taxes, bonuses and new buildings and machinery?

Dr. Matthai—I suppose we may take it that 9s 3d per cwt for 1927 is a fairly accurate figure to take for Java as representing all costs excluding depreciation and interest on capital?

Mr Wynne Sayer—I am not prepared to agree with you there

Dr. Matthai—What I am trying to suggest is this Supposing we took the figure of 9s 3d a cwt for 1927 and tried to deduce from that that in view of the increase in yield consequent on P.O.J. 2878 and the increase in the yield of sugar per hectare the present cost of sugar, we might get a figure not very different from the figure that you have yourself worked out?

Mr Wynne Sayer—That is true But take "Repairs to buildings and machinery 751 guilders" it is extremely difficult to verify that figure

Dr Matthai—We simply cannot verify any of these figures. The purpose for which we want the figure representing the present cost of Java is to get a sort of rough idea of the minimum limit at which, without putting themselves to any loss, Java might be in a position to sell, and it is quite obvious that we cannot work out that figure with any accuracy because we are in the realm of conjecture all the time. Therefore I was thinking that for the purpose of making out a case in the report we have got to start from a figure which is an official figure and from there deduce by logical reasoning what might be the present figure which in fact might not differ from the price you have worked out.

Mr Wynne Sayer—May I suggest that you should question Noel Deerr very closely on the question of costs. He, of course, knows very well the inner workings of the sugar industry practically speaking in all parts of the world. There are certain items which are common all over the world in factory workings and I think if you ask him about this he would be able to give you a figure which would probably correspond very closely to mine.

President—I find it stated in one of the papers that before 1927 most of the molasses was thrown away in Java and it is only recently that it has a value. In the League of Nations report there is a memorandum by Piencen Geerlign in which also no credit is taken for molasses, so it occurred to us that the probable reason was that molasses at that time had no particular value.

Mr Wynne Sayer—A large quantity of molasses was always coming to India at a certain figure. Certain factories which are unfavorably situated have had in the past to throw their molasses away and put it on the land but on the other hand a great deal of Java molasses has always come to India for the purpose of distilling because, as you probably know, all the Indian factory molasses is used up for curing tobacco.

Dr Matthai—In India we have always got from Java, say, for the past six or seven years a quantity approximating 60,000 to 70,000 tons. It has increased recently.

President—Could you give us figures for 1926-27?

Mr Wynne Sayer—In 1926-27 it was 95,982 tons.

1927-28 ,, 97,101 ,,

1928-29 ,, 68,576 ,,

1929-30 ,, 71,761 ,,

There has been a drop since then. I cannot say that the demand has fallen off.

President—We know that the Asansol distillery which was taking Java molasses is taking it no longer.

Mr Wynne Sayer—That is so, but the alternative market for Java molasses I cannot trace, whether it is being used for industrial alcohol or what I cannot say.

Dr Matthai—Have you any information as to the time when this big demand for Java molasses from countries other than India started?

Mr Wynne Sayer—About four years ago I think.

Dr Matthai—In 1926-27 the figure was 95,982 tons?

Mr Wynne Sayer—Yes. You will find that since then there has been a drop and molasses are probably going elsewhere. Other places are trying to get molasses too.

Dr Matthai—Do you think it would be a fairly correct statement to make that about four or five years ago the main demand for Java molasses came from India?

Mr Wynne Sayer—On verifying my figures in the Bureau I agree with you.

Dr Matthai—The point I am trying to get at is, since Java produces 700,000 tons of molasses and if four or five years ago the Indian demand was

the principal outlet for Java molasses then obviously the bulk of the Java molasses would probably have been thrown away

Mr Wynne Sayer — They were. When we went to Java in 1920 they informed us what molasses they did not concreate, which is a special process they burnt as fuel and also used as manure for fields and the rest was thrown away. They sent quite a fair proportion of their molasses from those factories which were favourably situated to the East Coast and they were taken by the distilleries in India. Concreate molasses were stripped so low that if you put them into *hooka* tobacco you cannot get the sweet taste. *Hooka* tobacco is preferably treated with Indian molasses in the same way as naval tobacco is treated with rum in England.

Dr Matthai — Does it come to this that the sucrose content makes the difference?

Mr Wynne Sayer — Yes. We don't strip our molasses so far, if we did we would not get the price we are getting for them.

Dr Matthai — We had it suggested that the presence of glucose would be all right from the point of view of tobacco, that is to say, if you had 30 per cent sucrose and in addition a large amount of glucose, then from the point of view of mixing with tobacco it would be quite as good.

Mr Wynne Sayer — I cannot say anything definitely but the preference is there and that is why we get such wonderful prices for Indian molasses.

President — Whatever the position was four or five years ago as regards credit for molasses presumably now some considerable credit should be taken so far as Java is concerned?

Mr Wynne Sayer — Distinctly.

Dr Matthai — Could you give us an idea at all of what the credit should be?

Mr Wynne Sayer — I can give you the bulk figure for molasses imported into Calcutta this year.

Dr Matthai — Those are the prices at which exporters sell to Calcutta, that does not mean that the factories get the average price.

President — We received a statement from the Collector of Customs giving some of the rates at which molasses had been landed in Calcutta during the last few months. They were taken from invoices and we noticed that they varied considerably and there were no rates for molasses in bulk but only in kerosene tins and baskets. This of course means that they are exported in small quantities by exporters there and their prices do not necessarily mean that the Java Trust would be getting that price for all their molasses.

Mr Wynne Sayer — Java molasses would be sold in kerosene tins and baskets, there is no other way of sending molasses except by these methods until very recently. My Java correspondents informed me in 1923 that factories sold liquid molasses in tins at about 50 cents per tin delivered into the buyer's godown. Solid molasses cost 90 cents to 1 guilder per picul ex-store.

President — Actually they do transport molasses in tankers.

Mr Wynne Sayer — In Java there was till recently this concreting system and packing in tins and baskets or drums.

Dr Matthai — You mean the bulk of Java molasses comes in baskets and tins?

Mr Wynne Sayer — Yes. Till recently I have never seen it coming in tankers.

President — We notice in the United Molasses Company's report that they were using tankers extensively. In fact when there was shortage of tankers for the oil trade they used molasses tankers for exporting kerosene oil.

Mr Wynne Sayer — They might.

President — They have their tankers and they must be now using tankers entirely for molasses. In fact it is so stated.

Dr Matthai — This figure that you have got for the Belapur Company, did you get it from the Customs?

Mr Wynne Sayer — From Haji Shakur Gunny who handles most of the molasses in Calcutta

Dr Matthai — The figure that you got was the c i f price in Calcutta?

Mr Wynne Sayer — Yes, landed Calcutta including everything

Dr Matthai — Have you got any figure as to the cost of tins or drums?

Mr Wynne Sayer — No, but I should say it would be about 7 annas

Dr Matthai — Would it be 2 tins to a cwt?

Mr Wynne Sayer — I think it would hold more than that

President — At whatever price molasses is landed in India, it does not necessarily represent the average price which the Java Trust will get for their molasses

Mr Wynne Sayer — No

President — Is there any method of reaching the approximate figure?

Mr Wynne Sayer — I submit a statement showing the sale price of molasses by some factories in Java for the last four years

President — One point which occurs to me is that the Java makers of methylated spirit are able to land their methylated at 14 annas a gallon in Calcutta which represent a very much lower price than that corresponding to the price at which they are selling their molasses at Calcutta

Mr Wynne Sayer — There again they are very carefully protected. I do not know where their methylated spirits works are. They are probably quite adjacent to the factory

President — 14 annas merely represent the net price that they are getting

Mr Wynne Sayer — It is very difficult to say. I do not know the distillery figures

President — It occurs to me that for the purposes of considering what credit we should take for molasses, it might be worth while to work it out on the basis of 14 annas a gallon

Mr Wynne Sayer — In that case it is difficult to realise why this increase in export of molasses is going on from Java

Dr Matthai — About only 1/6th of the molasses now produced in Java is used in local distilleries

Mr Wynne Sayer — Yes, for methylated spirits

Dr Matthai — 5/6ths have to go out as molasses, so that whether the price that they realise for molasses on their methylated spirit would correspond to the price that they get on their molasses is rather a difficult question

Mr Wynne Sayer — I speak, of course, subject to confirmation. Very probably in the lean years certain factories made long term agreements with the distilleries in regard to methylated spirit and might now be forced to continue to supply the molasses

Dr Matthai — This is from Frets about Sugar. This is a note by Pilsen Goerlitz that Java molasses fetched prices ranging from 6 dollars to 9 dollars per metric ton f o b factory. They work out to a rupee per maund, f o b factory

Mr Wynne Sayer — Yes, that includes the freight to port

Dr Matthai — Does f o b factory mean f o b Soerabaya? I thought it was simply ex-factory

Mr Wynne Sayer — It means free on board

Dr Matthai — What does f o b factory mean?

Mr Wynne Sayer — It is brought direct from the factory and put on board the steamer the factory paying the freight. The usual contract was to deliver the stuff into the buyer's godown at one of the ports

President — From the f o b factory figure you have to deduct some figure corresponding to transport from factory to port?

Mr Wynne Sayer — That is so

President — No charge on storage?

Mr Wynne Sayer — That is how I read it. F o b may be a misprint for f o r stored at the ports is paid by the buyer

Dr Matthai — This is July 1930. The whole discussion related to the Java sugar crop of 1929

President — Since then there has been a rise in the price of molasses

Mr Wynne Sayer — Yes, the rise in the price of molasses has been stronger. Molasses has gone up so strongly that at the present moment I regard the molasses market as one of the most important markets of sugar. I am not exaggerating when I say that a large portion of the molasses which has already been sold at over Rs 2 can now be sold at Rs 3. In 1924-25 the highest figure was Rs 2-2 6 and in 1925-26 it was Rs 2 2 0 delivered at the factory. In 1926-27 it went up to Rs 2-9 0. I am not giving you the average figure. I am giving you the top figures. Next year we saw a drop to Rs 1-9 6 and in 1928-29 we were right down to Rs 1-0 0. Now this year it has absolutely soared up in the region of Rs 2 12 0 and Rs 2-14 0.

Dr Matthai — In 1926-27 the c i f price of molasses taking the average in the trade returns was Rs 54 a ton.

Mr Wynne Sayer — It is just about Rs 2.

Dr Matthai — I can therefore understand that in that year the price realised for molasses at the factories here would be very high and they are in your statement. In 1927-28 the c i f price dropped to Rs 41.

Mr Wynne Sayer — Yes.

Dr Matthai — In 1928-29 it dropped again to Rs 34, and in 1929-30 it went up slightly to Rs 38 5.

President — What has been contested is not that the non-co operation movement has knocked out the sale of imported cigarettes but that the molasses is used not for cigarettes, but exclusively with *hooka* tobacco.

Dr Matthai — As a matter of fact we put this very point to the representatives of the Philibet factory who came to give evidence at Darjiling. They didn't accept the thing at all.

Mr Wynne Sayer — I don't know. That is what I have been told.

Dr Matthai — What is the highest price for 1929-30?

Mr Wynne Sayer — Rs 3-1-0.

Dr Matthai — In 1929-30 the c i f price was Rs 36.

Mr Wynne Sayer — I don't think that has any connection at all.

Dr Matthai — What I am suggesting is till 1929-30 the price of molasses realised by the factories in India closely correspond to the c i f price. In 1929-30 if the price of Rs 3 is correct, apparently the two things are taking a different course.

Mr Wynne Sayer — Yes. This course is due to the movement which has affected the price of molasses. Java molasses cannot be put into the *hooka* tobacco. That is my information from the trade. The result is that you have got a tremendous expansion of the molasses market. It may also be due to the fact that a single company does the bulk of molasses imports into India.

Dr Matthai — You mean all the people smoking cigarettes have gone back to *hooka*. It is a very unsatisfactory substitute, because you cannot take it about.

Mr Wynne Sayer — I am not prepared to argue that. When Mr Noel Deerr comes to give evidence, you can ask him what is the cause of the extraordinary rise in the price of molasses produced by factories here. You have two things — one is for using in the *hooka* tobacco and the other is for

adulterating gur I once heard that a large quantity of molasses sold by a certain factory was put into gur and resold to the same firm

Dr. Matthai —I gather from your own note that Japan is now self-supporting

Mr. Wynne Sayer —It is so. What brown sugar she imports from Java, she refines and sells to China principally

Dr. Matthai —China's power is greatly upset?

Mr. Wynne Sayer —Yes. I can send you the figures from the office. They will show where the Trust has sold each month and in what quantities

President —You don't give any credit for molasses in your calculation?

Mr. Wynne Sayer —No

President —That you have already deducted in your manufacturing charges?

Mr. Wynne Sayer —I have taken that as an outside thing. My two annas as the manufacturing cost per maund of cane has nothing whatever to do with molasses

Dr. Matthai —I suppose probably 0-2-6 cane cost is nett cane cost after deducting molasses?

Mr. Wynne Sayer —No

President —Do you mean to say that another 6 annas can be taken out of this Rs 3 4-0 as credit for molasses?

Mr. Wynne Sayer —I am not prepared to say that 6 annas can be taken out. It always varies according to the freight. If your factory is far inland you cannot differentiate on the question of molasses but then a certain amount of molasses probably goes from the factories right to the coast

President —Shall we take it that some figure can come off this Rs 3-4-0 on account of credit for molasses but that you cannot say what it is? All you can say is that this figure of Rs 3 4-0 would be lower on the average?

Mr. Wynne Sayer —Yes. I am absolutely certain that 2 annas per maund of cane as the manufacturing charge is capable of reduction in a lot of the well managed factories

Dr. Matthai —Taking the Calcutta statement the firm item is "Allowance on actual shortage—According to market rate", what proportion of market rate is it? I suppose what you mean is 3 lbs. a ton or something like that?

Mr. Wynne Sayer —Shortage on weightment is actual shortage, that is not estimated shortage

Dr. Matthai —Then "Brokerage", is it $\frac{1}{2}$ or $\frac{1}{4}$ th per cent?

Mr. Wynne Sayer —Half per cent

Dr. Matthai —How many bags do you take to a ton?

Mr. Wynne Sayer —10 bags to a ton is the official weightment rate, but as regards these Java bags they can contain anything up to 226 lbs

Dr. Matthai —So that for practical purposes we can take it as 10 bags to a ton?

Mr. Wynne Sayer —Yes, but there is variation. If the first 50 bags they weigh are over a certain figure then extra duty is charged, if it is under a certain figure it is passed by the Customs. They allow a variation of 2 lbs

Dr. Matthai —I suppose practically that would make very little difference. In order to get a standard rate of landing charges we may work on the assumption of 10 bags to a ton?

Mr. Wynne Sayer —Yes

Dr. Matthai —Your Bombay charges are things which puzzle us most

President —Bombay "1 per cent or 3 lbs per bag", taking 10 bags to the ton that would be 30 lbs per ton which would work out to considerably more than 1 per cent

Mr. Wynne Sayer —A little more than one per cent. We get these figures from Bombay brokers and actually precisely how they work we cannot say

Dr. Matthai —Does every bag of Java sugar that comes into Bombay pay town duty?

Mr. Wynne Sayer —Yes

President —What is the difference between town duty and municipal duty?

Mr. Wynne Sayer —Municipal duty is for wear and tear by carts of the municipal roads and town duty I think is a surcharge, is a sort of octroi

Dr. Matthai —Is one justified in thinking that the market price of sugar in Bombay would include town duty?

Mr. Wynne Sayer —Yes

Dr. Matthai —That is to say on that account there would be a difference between the price of sugar per maund in Calcutta and Bombay of, say, 8 annas a maund?

Mr. Wynne Sayer —The whole thing is this. If you go and buy a maund of sugar from a merchant in Bombay for export, then the question of refund of duty comes in

Dr. Matthai —The duty is refunded?

Mr. Wynne Sayer —I think it is

President —It must be, because otherwise the income to the Bombay Corporation would be enormous

Mr. Wynne Sayer —Obviously the town duty is still charged over sugar consumed in Bombay

Dr. Matthai —The freight from Java to Bombay is higher than from Java to Calcutta, is it not?

Mr. Wynne Sayer —Slightly higher. It bumps the other way because European beet sugar comes to Bombay at a less freight

Dr. Matthai —Where is beet sugar generally shipped from?

Mr. Wynne Sayer —It can be shipped from anywhere. A lot comes from Hamburg

Dr. Matthai —From Hamburg to Bombay the freight is lower than from Java to Bombay?

Mr. Wynne Sayer —No, I don't think it is. It is usually 1s per cwt

Dr. Matthai —What is the idea of higher freights being charged from Java to Bombay than from Java to Calcutta?

Mr. Wynne Sayer —Because it is a longer run

Dr. Matthai —The Bombay rate is higher than the Calcutta rate by 1 5 guilders to 0 5 guilders per ton leaving out the rebate

Mr. Wynne Sayer —That is a very slight amount when they are cutting costs to the extent they have cut to meet beet sugar. They have got very little to spare. I don't think beet sugar is coming to Calcutta because it does not travel well through the Bay of Bengal. It sweats and loses colour

Dr. Matthai —It is rather substantial, it makes a difference of an anna? Yours probably are the charges from ex-factory to f o b in the case of some particular factory or factories but here they say 4½d is the average charge from ex-stores. So that if you take the charges in regard to factories situated further inland probably you may get a figure like 4½d while yours works out to 3½d

Mr. Wynne Sayer —My figure of 3 annas per maund for f o b charges in Java is correct as 3 annas per maund = 4 annas per cwt = 4½d per cwt at the rate of 1s 6d = 1 rupee

President —Why does the beet crop not enter the market till October?

Mr. Wynne Sayer —Because it is not available. The beet manufacturing season starts in September

President —When does it end?

Mr. Wynne Sayer —It will go on till December—January

President —It does not come during the rest of the year?

Mr Wynne Sayer —It does not come in any appreciable quantity during the rains

Dr Matthai —The shipment continues from October until when?

Mr Wynne Sayer —Until May

President —So May till October the Java people have it all their own way?

Mr Wynne Sayer —Yes, practically speaking

President —As regards the Indian sugar costs, we were talking about molasses just now and commenting on the high price which at present exists. I suppose you will agree that a price like the present one would be unsafe to take as likely to continue for the next seven years?

Mr Wynne Sayer —It is most unsafe

President —What level should we take for the next seven years?

Mr Wynne Sayer —If a protection on duty was to be placed

President —Supposing we said that for the next seven years the price we should take for molasses should be Re 1-8-0 and for the period after that one rupee?

Mr Wynne Sayer —I should take it at Re 1-4-0 and then drop it to a rupee. If you did recommend any duty it would increase the number of factories at once, from the time it was passed factories would spring up within a year and some would be in full swing certainly within two years.

Dr Matthai —At present (season 1928-29) we are producing about 68,000 tons of white sugar from cane direct*. That gives us about 31,000 tons of molasses.

Mr Wynne Sayer —Yes. For every maund of sugar you produce about 0.40 maunds of molasses.

Dr Matthai —About 31,000 tons of molasses. We are importing 70,000 tons from Java. That makes it 101,000 tons and then khandaris make about 50,000 tons of white sugar.

Mr Wynne Sayer —70,000 tons of molasses.

Dr Matthai —Their production of molasses would be bigger.

Mr Wynne Sayer —It would be bigger. Nobody can tell on account of the price what the khandaris are going to do. I can't take any khandari figure as definitely for 7 years. I think Clarke must have told you that the whole industry will vanish.

Dr Matthai —Leave out khandaris for the time being. Then you have a total consumption of about 100,000 tons of molasses taking the Indian production and the imports. Supposing the Indian white sugar factories increased their production to 400,000 tons in the next 10 years the molasses they produce could be consumed in the country.

Mr Wynne Sayer —There again I doubt that. The molasses they produce if they expanded could not be taken for the hooka tobacco trade, it would have to go to ports and pay freights. Some other use will have to be found for the surplus molasses.

Dr Matthai —Beyond the local markets?

Mr Wynne Sayer —You will have realised that Lyall Marshall could not afford to send their Rosa molasses to their distillery at Asansol, because they can get Java molasses cheaper. That is why I asked you to put the rate at Re 1-4-0. Indian molasses have got to go to Calcutta by rail.

President —Have you any idea of the railway freight on molasses?

Mr Wynne Sayer —No.

President —It would be higher than sugar.

Mr Wynne Sayer —It is a nasty thing to handle. It would be higher than sugar, I think. It is an intermittent trade too. It is a bulky thing.

* In 1929-30 we produced 89,786 tons sugar direct from cane and molasses 85,400 tons.

I don't think you can get anything for molasses once the local demand is satisfied. If you go to Calcutta and face the incoming Java molasses, you will be smushed to smithereens.

Dr. Matthai—We start with Rs 1 4 0. But ultimately you say a rupee would be the fair rate to take. Supposing you reach a stage where you produce about 500,000 or 600,000 tons of white sugar, taking a long long view, then you see you have about 200,000 tons of molasses here. Then all your preferential markets have been exceeded and you have got to transport it to places like Madras and Calcutta and even a rupee might be too much.

Mr. Wynne Sayer—By that time I believe we shall reach an agreement with the oil people by which the manufacture of industrial alcohol in India would be possible. We shall be sufficiently big to hold a pistol over the head of the oil combine.

President—You accept Rs 1 4 0 as reasonable for the first seven years and one rupee after that, as far as can be seen at present?

Mr. Wynne Sayer—Yes.

President—Where is this place Siswa bazar?

Mr. Wynne Sayer—In the Gorakhpore District.

Dr. Matthai—Is that the biggest gur market?

Mr. Wynne Sayer—Yes.

President—How are these returns obtained?

Mr. Wynne Sayer—From the buying Agents for the big groups at Siswa bazar.

Dr. Matthai—As far as the sugar factories in areas west of the Gondak are concerned when we are trying to fix a fair price for cane in the factories, then I suppose Gorakhpore gur prices are the prices that would determine the cane prices.

Mr. Wynne Sayer—Yes.

Dr. Matthai—Supposing you wanted to get a price that would be a fair price in relation to the price of gur for the factories east of the Gondak, which gur prices would you take?

Mr. Wynne Sayer—I should take the mean of the local prices of gur in the particular districts where factories are working.

Dr. Matthai—Can you suggest any particular markets?

Mr. Wynne Sayer—There must be a certain amount of gur brought in bundles from the districts by banias and dealers.

Dr. Matthai—There can't be any great difference between Gorakhpur prices and the prices of other places.

Mr. Wynne Sayer—The great market for refining gur is in Gorakhpur District. This is Siswa bazar, therefore all the gur has got to go there.

Dr. Matthai—If you take a figure of Rs 5 8-0 for refining gur at Siswa bazar, what do you consider is likely to be the price of gur at intermediate points? Can we take Rs 5?

Mr. Wynne Sayer—First and foremost it depends on where the gur is coming from and secondly the way in which the raiyat obtains the advance from the bania.

Dr. Matthai—You take all these factors into account and give me a final figure? What do you consider would be an approximate figure if the price at Siswa bazar for refining gur was Rs 5 8-0?

Mr. Wynne Sayer—The price of refining gur this side would be 8 annas less.

Dr. Matthai—It would be Rs 5.

Mr. Wynne Sayer—Yes, subject to reservation. There is no depôt for refining gur here. It has got to go back there and it is a question of freight, but then I am not prepared to state that the Siswa bazar market is enabled from Gorakhpur to fulfil all the refining demands that might be

made on it. Therefore there would be no need for the *gur* to move from this side.

President —What about the prices of eating *gur*?

Mr Wynne Sayer —We discussed this matter carefully on the Indian Sugar Committee—the question of various *gur* prices at various centres and we were totally unable to come to any decision as regards that.

Dr Matthai —I suppose this increase in price in the Siawa bazar, for example, from Rs 9-14-0 to Rs 4-0-0 in May 1928 to Rs 4-11-0 to Rs 5-8-0 in May 1930 is entirely a question of local supply and demand.

Mr Wynne Sayer —Yes, due to the fact that an enormous number of people who used to make *gur* are going to make it into sugar.

Dr Matthai —I don't quite follow that because there are two circumstances on the other side. There is first the fact that your Coimbatore cane is yielding a larger amount of sugarcane and on the other hand the fact that there is less market now for refining *gur* means that there is a glut of refining *gur* for general purposes. Both these circumstances must bring about a decline in price instead of a rise.

Mr Wynne Sayer —No. If there is a drop in the price of refining *gur*, a large number of riyats who make *gur* for refining stop doing it. West of Gondak 132 lakhs of maunds were crushed in factories in 1929-30 against 121 lakhs in 1928-29.

President —There was a bad crop in 1928-29.

Mr Wynne Sayer —As a matter of fact it is an expansion.

President —In 1928-29 there was a bad crop. You say that in your replies to the questionnaire.

Mr Wynne Sayer —Yes. In the United Provinces but it refers to Meerut side. There has been a steady rise and I think it is due to the fact that people are no longer making *gur* and sending it to Siawa bazar and the large refining groups have ceased buying to a great extent. The Cawnpore refinery is practically shut.

Dr Matthai —Therefore the point is that on account of the fall in the demand there has been a restriction of production by the riyat.

Mr Wynne Sayer —Yes.

Dr Matthai —That is to say a fall in demand instead of leading to a rise in prices has led to a fall in supply, it has led to more than a proportionate fall in supply.

Mr Wynne Sayer —It is a very moot point. Here is a mill for an area. He produces the *gur* for Siawa bazar and he finds that there is no demand. He has got to sell his *gur* for anything it fetches. He cannot store it. Have you noticed the rise and fall of all the crops in India? There is a steady move followed by a rush.

President —On what information are these prices of *gur* based?

Mr Wynne Sayer —On information obtained from the Commissioner of Police in Calcutta and from people on the different markets. In some places District Officers and officers of the Agricultural Department supply the information.

President —Mr Clarke told me that at Shahjahanpur if he wants to find out the price of *gur*, he must go to the local market and find it for himself. It varies very often between Rs 1 and Rs 1-8-0.

Mr Wynne Sayer —I go entirely by the local authorities.

President —We wanted to know what value we should attach, we have information from Mr Clarke as to what he considers the price.

Mr Wynne Sayer —If you ask my opinion, I should attach no value.

President —Siawa figures you collected yourself?

Mr Wynne Sayer —Those are from the actual buying agents.

President —That is in a different category.

Mr Wynne Sayer — Yes

President — One cannot even say that they are collected on the same methods

Mr Wynne Sayer — No

President — The Calcutta figure is Rs 8-30 for 1. The company upcountry actually receives at factory Rs 9-80. Then the freight advantage is the difference between Rs 9-80 and Rs 8-30

Mr Wynne Sayer — No

Dr Matthai — Why not?

Mr Wynne Sayer — The freight advantage is the difference between the rival price of Java sugar at Cawnpore and the factory price plus the freight between the factory and Cawnpore

Dr Matthai — Yes. The rival price in Cawnpore is the Calcutta price plus the freight from Calcutta to Cawnpore. Therefore the difference between the realised price at the factory and the Calcutta price gives you the difference between the freight from Calcutta to Cawnpore and the freight from the factory to Cawnpore

Mr Wynne Sayer — One thing I want to draw your attention to is the fact that the freight rates from factories here to Cawnpore are not based on flat rates as those from Calcutta. They are very high

Dr Matthai — That is true. Whatever the freight is, the difference between the freights from Calcutta to Cawnpore and from the factory to Cawnpore represents the freight advantage and that must correspond to the difference between the Calcutta price and the realised price at the factory

Mr Wynne Sayer — You would say that the advantage in freight for a factory like Lohat represents the freight from Calcutta to Lohat, would not you?

President — I would say that the Calcutta price being Rs 8-00 and the Lohat price being Rs 9-40 Lohat gets Rs 1-40 per maund extra because it is situated upcountry instead of being in Calcutta

Mr Wynne Sayer — That is true

President — That would give us some idea. On an average that is the freight advantage?

Mr Wynne Sayer — The difference between the factories' realised prices is greatly influenced by the distances of factories from Cawnpore and not by the grades of sugar

President — If we took the average of Calcutta prices between December and June, that would be fair, would it not, in order to get an idea of the prices against which these factories compete?

Mr Wynne Sayer — That would be fair. I would request you note down that question and ask Mr Shakespear. They generally sell a certain amount of sugar forward to obtain finance

Dr Matthai — How do you get the average price for imported sugar in Calcutta? Do you make a weighted average?

Mr Wynne Sayer — I take the imported prices and flatten them

Dr Matthai — You make a flat average?

Mr Wynne Sayer — Yes

Dr Matthai — But a flat average would be very misleading?

Mr Wynne Sayer — You mean on the different months?

Dr Matthai — Supposing you have a particular figure for say a month like August when there is a large shipment and you have a figure for May when the shipment is very low?

Mr Wynne Sayer — The large shipment in August does not affect the Indian sugar factories at all

Dr Matthai — What are the prices?

Mr Wynne Sayer —The Indian factory sugar is really not in the market competing. If sugar is sold on sample, sulphitation sugars do not keep through the rains. The bulk would not be like the sample whereas carbonitation sugars keep much better. Therefore in the case of Indian factory sugars, it is essential to sell them before the first of June.

Dr Matthai —Most of them being sulphitation?

Mr Wynne Sayer —Yes, the majority of them being sulphitation. So then question is to get rid of the sugar before the bulk becomes different from the sample.

Dr Matthai —Within what period is it all sold?

Mr Wynne Sayer —Between November and June—I speak subject to confirmation by Mr Shakespear. If you have the balance sheet of any of these companies you may be able to see the amount of sugar in stock. You would generally see that they don't have a very large stock in hand.

President —Of course in comparing Indian prices and prices of imported Java, we must take Java white I suppose?

Mr Wynne Sayer —Always, because of the difference in duty.

Dr Matthai —On most of the Indian sugars when we try to fix a fair selling price for the Indian factories, we ought to allow a certain rebate on Java because of the difference in quality. If Java fetches Rs 8-4-0, then the corresponding price for Indian sugar would be Rs 8.

Mr Wynne Sayer —I don't agree entirely to that. Java Superior Head Sugar (white) polarises about 99.59 per cent, Java S H S (Brown) about 98.52 per cent and the best Indian Factory sugar No 1 a shade above 99.70 per cent.

Dr Matthai —Supposing I was trying to find a fair selling price for Samastipur whose sugar polarises about 98.6?

Mr Wynne Sayer —It is not white.

President —Perhaps Samastipur sugar is preferred because it is swadeshi.

Mr Wynne Sayer —That preference has diminished to a certain extent.

President —Here the price of the 1st quality Samastipur sugar is Rs 9-8-8 but the second quality Samastipur is very nearly Rs 9-2-1. We could not rely on these comparative figures, could we?

Mr Wynne Sayer —No. You have to take a flat rate between the two.

President —In previous years?

Mr Wynne Sayer —You must take the average selling price over years.

President —It might be quite a rupee.

Dr Matthai —Would the carbonitation sugar compete with Java double sulphitation?

Mr Wynne Sayer —But we have not yet reached that stage of sugar manufacture where we can produce sugar which is quite as good looking as Java sugar.

Dr Matthai —That is to say although the polarisation of your carbonitation sugar is quite as good as Java, in appearance it may be slightly inferior?

Mr Wynne Sayer —Polarisation has nothing to do with colour.

Dr Matthai —Although your polarisation may be the same some allowance has got to be made for the difference in appearance?

Mr Wynne Sayer —Yes.

President —How would you advise us to proceed in attempting to estimate the difference in price between first and second quality Indian sugar?

Mr Wynne Sayer —Take practically speaking 50/50 and flatten the rate between the two.

President —Take the rate for how many years?

Mr. Wynne Sayer —Five years. If you talk to Begg Sutherland's broker he will give it to you. You can take a rupee between the two as the safest thing.

President —If the price of first is Rs 10 the price of second would be Rs 9?

Mr. Wynne Sayer —That is right. Split that figure up.

President —Taking a figure of Rs 10 for the first if we average it it comes to Rs 9.80.

Mr. Wynne Sayer —That is right.

President —This price of cane paid per maund by individual factories, these were given to you by factories or did you make enquiries yourself?

Mr. Wynne Sayer —Factories supplied the figures and in some cases I made enquiries myself. I know a lot of their growers. These are the flattened rates.

President —These are the actual prices delivered at the factory?

Mr. Wynne Sayer —Take a factory like Baruah (Champman) which buys 6 lakhs of maunds out of total of 18 lakhs from stations 90 miles away and produces 4 lakhs maunds round about itself and brings in another 8 lakhs of maunds from stations and places 18 or 19 miles away. His flat rate must naturally be heavily swayed by the fact that he has to pay freight on 6 lakh maunds over a distance of 90 miles.

President —This price does not include such items as propaganda?

Mr. Wynne Sayer —I think it includes everything.

President —Will it actually include propaganda and demonstration?

Mr. Wynne Sayer —I think so to the extent they do it and it would also include interest, they have to give out a lakh of rupees as advance and they have to pay interest on it to the Bank.

Dr. Matthai —They have got a separate item 'Interest on Bank advances'. It would be part really of interest on working capital.

Mr. Wynne Sayer —That is on money advanced on sugar stocks.

Dr. Matthai —The actual cost of cane delivered at the factory would not include interest on advances they have received from Banks which would go into the factory account.

President —In one factory there is a charge of Rs 4,000 for cane propaganda.

Mr. Wynne Sayer —In regard to cane propaganda when they are making advances to a man to grow cane they charge no interest. Then they give out Co. cane seeds at the mill rate, they are bought from others and carted to the factory and they give it out to the ryots. There must be cost of that cartage. That figure of Rs 4,000 will include all cane charges, that is to say pay of the cane superintendent, weighing staff, handling, loading and so on.

Dr. Matthai —Can you explain to us how Belapur realized Rs 11-2-7 for their sugar in 1929-30 when the import price was somewhere about Rs 9.80? How do you account for that big difference?

Mr. Wynne Sayer —I can only suggest that they sold it at Poona and the freight over the Ghats being much higher than ordinary freight rates they had the freight advantage. I don't think they sold it in Bombay or near Bombay.

Dr. Matthai —Hyderabad is one of the important markets. I think there is a great deal of this *swadeshi* preference on the Bombay side?

Mr. Wynne Sayer —Yes, there is.

President —It looks as if anything we might do for the upcountry factories would more than suffice for Belapur if they are going to get this price for their sugar?

Mr Wynne Sayer—If you are going to stabilize the price at Rs 9-8-0 per maund for this tract, they won't be able to work on that, they would require a much higher protection than that.

Dr Matthai—When did you see their costs?

Mr Wynne Sayer—Some years ago. I think their cost of cane is high but then they have the advantage of thick cane.

Dr Matthai—They have kept it down to between 7 and 8 annas. I think your proposal of Rs 9-8-0 will see them through assuming that they get the freight advantage which they get now. Against an import price of Rs 9-8-0 last year in Bombay they realized Rs 11-2-7.

President—Whatever we give to the Indian sugar factories in this part owing to freight advantage Belapur would be getting a considerable addition per maund.

Dr Matthai—It is not entirely a question of freight advantage. I think they have been able to do a lot of propaganda based on the idea of *swadeshi* sugar as against foreign sugar and that has helped them a great deal.

Mr Wynne Sayer—That is not a basis on which one can place any reliance to base protection.

Dr Matthai—The point is rather different. Supposing we found that an extra duty of Rs 1-8-0 or Rs 2 was sufficient in the case of the great bulk of the factories in the sugarcane area, then assuming that there was this difference, the Belapur factory would be able to enjoy the benefits of it. At any rate Belapur would not be able to complain if the price that we took into account was the price of sugar at the factories in the sugar belt area?

President—The point we were raising was that assuming that the Northern Indian sugar factories were the factories whose costs we should take into account in estimating the measure of protection which should be granted, would you consider that in view of the fact that Belapur was getting a very much higher price than the Northern Indian factories, any protection based on the Upper India factories costs would also suit Belapur?

Mr Wynne Sayer—I think in anything of this description you would have to legislate for the majority.

Dr Matthai—Supposing this rate of duty based upon the factory costs in Northern India does not suit Belapur. Belapur would have to take it?

Mr Wynne Sayer—I regard that as an isolated factory, put up in a place where I am doubtful whether the industry is ever going to develop. It is an independent adventure and it does not really count in the Indian Sugar industry. Whether Belapur succeeded or went out would make no difference in the development of the Sugar industry in India.

President—Could you give us any information on these points: the expenditure per annum on the Coimbatore Research Station, other expenditure on research by the Central Government on sugarcane and also the expenditure of the provincial Governments on sugarcane research and demonstration?

Mr Wynne Sayer—I can give you that.

President—We want some guide to compare the expenditure on sugar cane in India with say Formosa.

Mr Wynne Sayer—It is almost impossible to separate out the amount the provinces spend on sugarcane research.

Dr Matthai—Take a work like Clarke's work at Shahjehanpur.

Mr Wynne Sayer—That should be cane work but Coimbatore is the place where actual research work is done. We can give you that. I could also give you Shahjehanpur.

Dr Matthai—The way we are trying to approach the problem is this. If we propose a protective duty on sugar we desire to couple with it the proposal that a considerable amount should be devoted on research work. Supposing we did that then we would proceed on this basis. Java now is having an annual contribution levied on factories which amounts to some-

where about Rs. 1 per acre per year. We want to suggest to the Government of India "See how far short India is of the rate of expenditure on research as compared to countries like Java and Formosa." But before we do that we have got to make sure of the total expenditure incurred by the Government of India, not merely the expenditure incurred by the Imperial Council of Agricultural Research and the Central Government but also by the Agricultural departments in the Provinces which may be properly debitable to sugar.

Mr Wynne Sayer —I will give you a rough approximation.

Dr Matthai —Have you got an account of the total expenditure at Pusa on the farms?

Mr Wynne Sayer —Yes.

Dr Matthai —Supposing you work out the proportion debitable to sugarcane on the basis of the total value of the crop as compared to the value of the sugar crop would you not get some basis?

Mr Wynne Sayer —I will give you the expenditure.

Dr Matthai —Take the sugar value in relation to the total value and divide the total expenditure on that basis. I will give you an approximate figure as far as I possibly can.

President —Why not take Munjri, Shahjahanpur and Gaidaspur? As regards the other provinces we may say that it is impossible to separate the figures.

Mr Wynne Sayer —Yes. Those two farms are really sugarcane. They have a staff solely devoted to sugarcane. To charge the percentage of the salary of a Deputy Director on cane work in a big district I regard as almost impossible.

President —If you could give us this, that would form some basis. As regards the rest of the province we would take a lump sum.

Mr Wynne Sayer —Yes.

Dr Matthai —You sent us once a note on the state activities in relation to sugar legislation.

Mr Wynne Sayer —In other countries?

Dr Matthai —Yes. Working roughly on the figures shown in your note I got the idea that in Java it was Rs. 3 per acre and in Formosa it came to much the same figure. Could you verify that?

Mr Wynne Sayer —Yes.

Dr Matthai —Have you any proposals to make as to how best the provision for research and development in regard to sugarcane should be made? You want to create an *ad hoc* body?

Mr Wynne Sayer —You have got to get down to absolute business. Take one manufacturer, one grower and one Government official. Let those three people go ahead and let the manufacturer say what he wants and let the grower say what he wants and the Government would hold the balance.

Dr Matthai —You first invite proposals from the local Governments. How exactly would you start?

Mr Wynne Sayer —Suppose you got a grant of Rs. 75 lakhs. You send for the industry, you send for the grower and you send for the Government official. Take these three people. You say "We have got this money. What you want done? What are the real needs of the industry?" They will tell you and then you send for your experts and ask them what they can do.

Dr Matthai —Supposing you constitute a body consisting of representatives of the growers, of the industry and of the Government, that might be another Sugar Committee.

Mr Wynne Sayer —No. It would be the controlling body of this grant.

Dr Matthai —The Sugar Committee is constituted on that basis.

Mr Wynne Sayer —We want something which is going to be practical and which can deal with the industry

Dr Matthai —The advantage of using a body like the Imperial Council in this matter is they are an incorporated body having the power of holding the funds. Supposing you suggest that a certain grant should be made, you can get Government to make the grant to this independent body and that body could hold the funds. There is no question of amounts lapsing and going every year to Government for sanction. All that is avoided if you have a body like that.

Mr Wynne Sayer —I agree with you, but I don't recommend that you should give money to a body like the Imperial Council. I am not a believer in this waste of time by trying to revivify the *gur* industry. I think it must die and nothing would save it.

President —It might die slowly instead of quickly.

Mr Wynne Sayer —So if we concentrate on the white sugar industry, we are then in a position to make India self-supporting. Concentrating on the *gur* industry leads us nowhere. The mark left on the *gur* industry in the past 20 years is not perceptible, whereas the work that we have done for the white sugar industry is distinctly perceptible. You will see from my figures the efficiency of the white sugar industry in every way.

President —Can you tell us what is the constitution of the Imperial Council?

Mr Wynne Sayer —It is an incorporated body. It is made under a charter.

President —The point I was interested in is this: when we were at Shahjahanpur the Director of Agriculture told us that under its constitution the Imperial Council was not at liberty to make a grant for any branch of agriculture which was not of All India importance, that is to say it could not make a grant to the provincial subjects such as demonstration and I wondered whether you had any information as to its charter. Have you got their Articles of Association?

Mr Wynne Sayer —No. You can get them from New Delhi.

President —I don't quite follow your proposal. If there was no Central Council how would you arrange for the development of the white sugar industry, through Directors of Agriculture?

Mr Wynne Sayer —No, through the industry itself. I don't see why we should go to the Directors of Agriculture. I would give money and tell the industry "we have taxed so much. Here is a certain amount of money, incorporate a body yourselves." I consider that the white sugar industry has not been adequately represented on the Sugar Committee.

President —That would mean of course all the research will be done in Bihar and Orissa, United Provinces and the Punjab.

Mr Wynne Sayer —Yes.

President —Would not the rest of the India protest that nothing has been done in the way of research?

Mr Wynne Sayer —They might protest. The point is that they have not developed. There is no development possible in Assam and Bengal is still hesitating.

President —Why do you say so?

Mr Wynne Sayer —First and foremost you have got a scale of prices for *gur* which I do not regard as ever possible. Secondly you are far too close to the ports. If you are going to develop the industry you must get away from the ports. Rs 1-8-0 is an advantage in the shape of freight. Sugar can be taken by river all over the place in Bengal, and so I don't think the industry is going to have a hard job to develop there. In the Punjab of course it is purely a question of water. There is already trouble about water for sugar cane.

Dr. Matthai —The irrigation there sets a definite limit to sugarcane expansion

Mr. Wynne Sayer —Yes

President —There is room for factories in the Punjab provided their working season is sufficiently long

Mr. Wynne Sayer —But remember the frost

President —Frost does not affect the new canes

Mr. Wynne Sayer —Experiments at Karnal were not very hopeful. If they went further north they would get badly frost bitten

President —If there is any development of the white sugar industry it should be in the south of the Punjab

Mr. Wynne Sayer —Yes. I think a lot of their cane work at Gunderpur has been badly spoiled by frost. What I call the white sugar tract. Mr. Nool Deen will tell you all about it—is the place where if you really spend the money on development you will be able to effect a lot of improvement. If you try and run a limited canalisation scheme you can make a tremendous lot of money. I am entirely in favour of regarding this place as the centre for the industry. It has proved itself to be the centre. As regards development don't spend money rushing about all over the place. If you are going to develop the industry, develop it from the centre

President —You would need a grant from Government for scientific research

Mr. Wynne Sayer —Yes

President —But you would leave the work to be done by the industry

Mr. Wynne Sayer —I would give the money to the industry and say "here is the money subject to the control of the senior Government official. What you want done."

President —You would make a grant?

Mr. Wynne Sayer —After all is said and done you are taxing all this white sugar, for what reason, to enable us to make white sugar. You are not taxing this white sugar for nothing. I hope I would certainly give them a grant—a big grant, but I would let them take up the control

Dr. Matthai —You are going to allow the grower some control

Mr. Wynne Sayer —One representative of growers, one of manufacturers, one Government official. These three people should be able to tell you what is actually wanted, and the control would be equally divided

Dr. Matthai —How can you pick out one manufacturer and one grower? How can you get a representative grower?

Mr. Wynne Sayer —You could find a very good representative grower. Take Kripal Singh. He is a perfectly representative grower and a very up to date man. He knows exactly what he wants. They want a better cane and some method of controlling the exigencies of the monsoon. We don't want all this money spent on the evolution of another small mill. The day of these small plants is finished, and we must march with the times. If you have a big factory in one place you can develop the industry. All the small Oubai factories are getting crushed one after another and not the big ones. All the small plants are going to be squeezed out

President —You really agree with Mr. Roberts that the gur industry should be prohibited

Mr. Wynne Sayer —Leave it alone. I don't think we are doing any good by trying to bolster it up

President —What about improving the yield of cane in other provinces?

Mr. Wynne Sayer —That comes down to practical politics. When I was in the North West Frontier, I was asked by a Pathan "you say you are going to give me improved canes. What on earth am I going to do with them? Even now I do not know how to get my crushing done. If you give me improved cane, I do not know how I am going to finish it."

President —They have some sort of co-operative crushing in some parts.

Mr. Wynne Sayer —But it is not general. Sometimes a man might be faced by the fact that he could not get bullocks. When a man is working on two acres of cane, how can you give him an efficient plant. In no other part of the world is the *gari* industry working. It is all finished. Here it may continue for some time as a good but it will die out. Round about Pusa the *gari* industry has completely died out. When I first came here 10 years ago they had a big depot outside Lohat and there were working a number of mills. White sugar has done away with them. If it was a very sound industry, why should it be done away with when the sugar industry came along.

Dr. Matthai —If the industry is to take over the thing, is it not better that the industry itself should do it by a cess rather than by a grant from Government?

Mr. Wynne Sayer —The point is this. You are taxing this white sugar that is coming into this country. In taxing it, I think you are pledged to the idea that you are going to put the white sugar industry on its legs. It is not going to be put on its legs unless some such thing as I have told you is done.

Dr. Matthai —In fixing the measure of protection we will take that into account. The practical difficulty of your scheme is this. When you suggest to the Assembly that three people consisting of a manufacturer, a grower and a senior Government official are to be entrusted with funds for the development of sugar throughout the country, will they might ask for representation on that body of other interests that you contemplate?

Mr. Wynne Sayer —What are the other interests?

Dr. Matthai —For one thing they would say that the manufacturing interests should be represented by more people than one.

Mr. Wynne Sayer —Put on two growers and two manufacturers. But the balance between the manufacturers and growers must be held equally. I stand for that absolutely. I am not prepared to see protection given and the whole money swallowed by the manufacturer. Neither am I prepared to see the money collected by taxing white sugar go into research which is not going directly to help the industry and the judges of the best research required are the people who are working the industry. That is the reason why in Java you don't find any member of the legislature on the Trust—on the Council of the Trust—in Java. They don't want any member of the legislature there.

Dr. Matthai —But the Sugar Trust does not get any grant from Government. That is the whole point.

Mr. Wynne Sayer —The Sugar Trust in Java is a very, very clear indication of how to spend money on an industry in a proper businesslike fashion.

Dr. Matthai —Provided the money is derived from contributions levied by the Trust on its constituent units?

Mr. Wynne Sayer —It does not matter where the money comes from.

President —It does matter. When the money is provided by Government, naturally the legislature would insist on Government being strongly represented.

Mr. Wynne Sayer —If they have a senior Government official to hold the balance, they should be satisfied. It is precisely for that reason that I have put him on there.

President —It would be difficult to get the legislature to accept that view.

Mr. Wynne Sayer —My whole opinion is that with an unwieldy body as the present Sugar Committee, you cannot get anything done.

Dr. Matthai —Your idea is largely inspired by the system in Java?

Mr. Wynne Sayer —Yes.

Dr. Matthai — Well then, you have to put the system here also on the same basis as it is in Java, that is to say, get the industry to work the whole thing by a cess on the constituent units?

Mr. Wynne Sayer — I do not think that is sound. You want most money when the industry is in its infancy, when there are fewest possible contributors. Therefore the scheme would not work. You want money now. You don't want it when you have developed the industry and when you have 200 or 300 factories. If you are going to put a cess on 66,000 tons what are you going to get? We tried to work it out on the basis of a cess but it was a total failure.

President — How much do you want in the first few years?

Mr. Wynne Sayer — I consider that you would want about Rs. 20 lakhs.

Dr. Matthai — Can you spend Rs. 20 lakhs?

Mr. Wynne Sayer — Quite easily. I want to put up light railways and good roads. The whole lot of the cane which is at the present moment outside the eating distance of factories, can then come to the station to be crushed. I want to improve the system of communications round about factories so thoroughly as to enable factories to double their output. Now not one of them would put in his money in the absence of the zone system. He does not know who is going to get the advantage. If there are light railways they can all load the cane. The miller would get the benefit of a good price for his cane. I am sure a man would. That is what you want the money for. You have got all the Combarbore canes. Nothing holds them back from being distributed except the difficulty of communications. Once you remove that difficulty you get the industry going. That should be tied on to protection. Everybody will then start growing cane and there will be no dearth of cane. That is why you want this money. You want better communications and your first lot of money should be utilised for that purpose. There are several places in the tract which need better communications. If you know as well as I do about all these places you would agree with me. With the improvement of communications you will be able to get cane cheaper.

President — "Communications" is a provincial subject.

Mr. Wynne Sayer — I am talking of factory communications. Lohat has put up a light railway and it has not been stopped because of communications being a provincial subject. I want the grant to be employed for that kind of thing. We ought also to have, with regard to all factories, a definite system of marketing. That should be put up and properly arranged and everything. There should be a method of selling sugar which would be common to all. There should be a controlling body for selling sugar. Then, there should also be standardisation of sugar.

Dr. Matthai — What do you call the first cost—at the factory is it?

Mr. Wynne Sayer — Yes, the manufacturer's cost. The first cost is the manufacturer's cost—what he would sell at direct from the factory without passing through any dealer's hands. It includes delivery at a warehouse in a port usually served by a factory.

Dr. Matthai — The manufacturer may sell at f o b.

Mr. Wynne Sayer — He can.

Dr. Matthai — May we take the first cost as meaning the price realised at the factory?

Mr. Wynne Sayer — Yes, but it includes transport from the factory to the port. The 1931, 1932 and 1933 crops of three mills (Soorabaya harbour) were sold at 10 guilders per ton (of soft molasses) free wagon at mill in February 1929.

Dr. Matthai — I take it that picul is equal to 136 lbs.

Mr. Wynne Sayer — Yes.

Dr. Matthai — Precisely or are there any decimals to it?

Mr. Wynne Sayer — We take it roughly at 136 lbs. If you want I can work it out exactly.

Dr Matthai —We shall be grateful if you can work out the exact cost of molasses per maund at the mill

Mr Wynne Sayer —Yes

President —In 1930 it is 23 guilders per ton?

Mr Wynne Sayer —That is the price at which two central Java Mills sold in April a few years' output of soft molasses

President —23 guilders per ton works out to Rs 1 26 per cwt

Mr Wynne Sayer —Yes, that will drop down to 14 annas a maund That is a wholesale figure

President —How much is a picul ?

Mr Wynne Sayer —136 lbs

President —2 47 per picul is pretty high

Mr Wynne Sayer —Yes I calculate that we are in the neighbourhood of 1 8 I can get you later figures if you want

Dr Matthai —These are recent enough

Mr Wynne Sayer —I can get you later figures if you like These are all isolated quotations The Trust does not deal with this sort of thing The mills do it themselves

President —This 3 76 guilders per picul in October 1929, is that f o b ?

Mr Wynne Sayer —Yes

Dr Matthai —This man who gets it at 10 guilders is I take it making a long contract?

Mr Wynne Sayer —Yes It does not seem to prove the fact that the price has fallen very much

Dr Matthai —Does it not mean that?

Mr Wynne Sayer —It means that this man has great difficulty in disposing it of Perhaps he is a long way off from the coast Perhaps he has made a long contract to get rid of the molasses

President —Each mill sells its own molasses?

Mr Wynne Sayer —Yes The Trust does not deal with it

President —Rs 2-14-0 is the quotation per maund for liquid molasses in tank wagons on the 30th August That is f o b

Mr Wynne Sayer —Yes

Dr Matthai —There is another thing Do these quotations include the cost of cans or don't they?

Mr Wynne Sayer —The quotation for liquid molasses in tank wagons is reported to be Rs 2-14-0 for Calcutta

Dr Matthai —What about this man who sells it at 10 guilders?

Mr Wynne Sayer —That I cannot tell you

Dr Matthai —Can you find that out?

Mr Wynne Sayer —Yes The variation in price must mean something of that description

Dr Matthai —What we should like to get is the price at the mill of molasses in bulk per maund

Mr Wynne Sayer —Yes

President —Hard molasses is more expensive than liquid What is the difference in price? Would it be 50 per cent more?

Mr Wynne Sayer —I cannot tell you

President —Hard molasses should as a rule be more expensive than liquid molasses?

Mr Wynne Sayer —It should be, but one never knows The Calcutta prices we have got from Haji Shakur Gunny Bombay prices are telegraphed to us The prices of liquid and solid molasses in Java have been obtained from the Weekbericht van de Handelsvereeniging at Soerabaya

Dr. Matthai —You are not interested in this estimate of cost given in the West Indies Commission's report

Mr. Wynne Sayer —I am not interested, but I would like to hear about it

Dr. Matthai —The point is in that report they give this figure of 9s 3d per cwt as the cost—and that is published in the report—excluding depreciation, interest on capital &c

Mr. Wynne Sayer —It includes repairs, renewals, taxes, interest, but after deducting the value realizable from molasses as made clear in the definition of terms given at the beginning of the commission's report

Dr. Matthai —The point that I want to raise is this. Somebody wrote to us to say that Dr. Maxwell wrote to the International Sugar Journal and said that the cost that they should have taken at the time was below 8 shillings instead of 9s 3d and that they over-estimated the cost at the time. How did he find out in respect of the items that the cost was over-estimated in the original estimate of the West Indies Commission's report? Have you any idea?

Mr. Wynne Sayer —No. I can say at once that they were over-estimated when you give me the figures

Dr. Matthai —It is possible on these figures, allowing for increased yield on account of POJ and so on, to bring the price down to a level more or less with yours and therefore 9s 3d appears to be correct

Mr. Wynne Sayer —Yes

President —In 1927?

Mr. Wynne Sayer —There was no question of Java feeling the pinch in 1927. Maxwell knows a great deal about Java and he knows what he is talking about

Dr. Matthai —I will read to you the footnote to Mr. Geelg's report "The annual report for the two estates gives costs in 1927 equivalent to 2 cents a lb." Then he goes on to say that the National Journal of November 1928 quotes an equivalent of 9s 3d per cwt. It is somewhat lower for 1929

Mr. Wynne Sayer —Mr. R. gave me a figure of 1.78 cents as the cost of their manufacture

Dr. Matthai —But credit for molasses you do not know?

Mr. Wynne Sayer —I am inclined to take something like Rs. 1.8.0

Dr. Matthai —If you take Rs. 1.8.0 it means that one-third of that ought to come out of sugar

Mr. Wynne Sayer —I think most of the figures I have given are as near as I can possibly get them

Dr. Matthai —Now let us take your answers to our Questionnaire for Manufacturers. In answer to question 11 you say that where there is no competition the system is one of agreements, that is to say if there is no competition for cane in the area then the usual practice is for the factory to make agreement with the growers and advance is paid and a particular price is specified in the agreement and delivery during the season at regular intervals is arranged. That is what it amounts to, does it not?

Mr. Wynne Sayer —The agreement as a general rule is that cane should be delivered when required

Dr. Matthai —And the requirement is indicated by the issue of *challans* so that it is possible on that basis to spread the supply over the whole season at regular intervals

Mr. Wynne Sayer —Yes

Dr. Matthai —They do not do it where there is any competition in a particular area. Then the practice is to buy through contractors,

Mr. Wynne Sayer —Yes

Dr. Matthai —Where there is competition and cane supply becomes uncertain is it not more to the point to make agreements in those cases?

Mr Wynne Sayer—No You have difficulty First of all if a man sold to somebody else who paid a higher price your only remedy is to run him in a court of law It will mean a lot of cases where there are 200 or 300 growers around your factory. It will mean a lot of expense and a lot of trouble Your management will have to be present at the Courts and there is no possible means of recovering the money from the man

Dr Matthai—When they arrange their purchases through contractors the prices are likely to be higher that is to say in the case of cane supplies purchased under a system of agreement I take it the cane is brought by cart by the grower himself?

Mr Wynne Sayer—The cane may be delivered at the station

Dr Matthai—Either at the railway weighbridge or at the factory weighbridge

Mr Wynne Sayer—That is right

Dr Matthai—Where it is bought through contractors the contractor arranges to deliver either at the station or into the factory?

Mr Wynne Sayer—The arrangement is that the contractor who pays the ryot makes the ryot deliver at the station

Dr Matthai—And the contractor gets a commission?

Mr Wynne Sayer—The contractor often pays him the lowest rate possible—a figure which is never known—and charges the factory the highest figure they will pay The contractor system is thoroughly bad for the ryot who is done in the eye very frequently

Dr Matthai—In answer to question 12 you say "All cane purchases from free growers are roughly based on gur * * * * *". What do you mean by free growers?

Mr Wynne Sayer—Ryots who are under no agreements with anybody and can make gur or sell their cane to the factory

Dr Matthai—That is to say under a system of contractors the cane purchased by the contractor will be based on or will the contractor buy from gur makers?

Mr Wynne Sayer—They will buy from the gur makers or from the ryots at the lowest figure they can get

Dr Matthai—It will be the same in the case of agreements. Supposing I make an arrangement with the growers for my cane supply the price that will be specified in the agreement would depend on the value of gur in the previous season?

Mr Wynne Sayer—No

Dr Matthai—Why not if you are the only factory working?

Mr Wynne Sayer—Cane will never come there will be a complete cessation

Dr Matthai—Does it not really work back to the question of gur price? If he refuses to bring his price down to the price I quote as a factory the only alternative he has is to turn his cane to gur

Mr Wynne Sayer—He can feed his cattle with it If he has to pay a very heavy price for cattle fodder why not feed the cattle on cane? The price of *bhusa* comes up to 12 annas or more I can sell *bhusa* at over 8 annas a maund

Dr Matthai—Does your point come to this that gur value is one of the determining factors?

Mr Wynne Sayer—It is one of the existing factors I would not say at this stage that would be the determining factor

Dr Matthai—That is to say if the gur price went up that would be a ground for asking a higher price for cane but if it went down you could not on that account ask the grower to bring down his prices?

Mr Wynne Sayer —What I mean is that if *gur* in this country is going out of calculation and the 130t once gave up making *gur* he would require at least two seasons to get back to it

Dr Matthai —Look at the future 10 years hence when we have Coimbatore canes on a very large scale and the cost of production per maund of cane goes down to 3 annas are you willing to suggest that we shall never be able to reduce the price of cane to the factory?

Mr Wynne Sayer —I do not consider that you could ever reduce it. It will stick to a flat rate of 8 annas because as I have said the Indian Industry gets its protection solely and simply on account of the fact that it pays a profit to the rice grower which Java does not do.

Dr Matthai —Supposing your rice grower is able to raise his cane at a rate of 3 annas per maund against 4½ annas?

Mr Wynne Sayer —Then I would give him the benefit of the extra amount because I do not see any necessity for the sugar factories if they are properly efficient to make more than a reasonable profit.

Dr Matthai —On your own estimate the manufacturing costs you have taken are more or less on the same scale as the manufacturing costs of some of the Indian factories. You have taken 8 annas a maund for cane in Java. Therefore the only scope for reduction that you have in the case of Indian factories is in the sugarcane cost.

Mr Wynne Sayer —The only reduction possible in the costs in India is in the cost of raw material until we get larger factories.

Dr Matthai —If then you are going to take the line that the agriculturist should always get 8 annas, how are you going to face the future?

Mr Wynne Sayer —In Cuba the grower is paid 50 per cent and the Cuban people can still produce sugar at a cheaper rate than anybody except Java. I consider that Java's cost of production is a production which is virtually speaking due to artificial conditions and how much longer that kind of thing will be allowed to go on I do not know. If you gave me a control of 2,000 acres round about a sugar factory and I had no growers' profit to pay I would guarantee to put cane on the carrier at under 9 annas.

Dr Matthai —For how long do you want this protective duty to be fixed?

Mr Wynne Sayer —10 years.

Dr Matthai —Supposing at the end of 10 years we dropped the protective duty and reverted to a moderate revenue duty and the price of sugar came down and you took your own formula of 50/50, the cultivator would not get his 8 annas.

Mr Wynne Sayer —But I should not think of bringing down the price of sugar to much less than Rs 10. It is no good taking the present figures in the world because the whole world is going towards ruin. You can pay as they do in Europe for the privilege of producing sucrose within your borders. I have a letter from Mr Alexander of the Journal des Fabricants de Sucre from France and he says "It is curious that you alone in the world think as we do in France." In France everybody thinks of war. You have hit the nail on the head by saying that all this production in the European countries which is being examined by the League of Nations is due to nothing but the fear of the next war and at the present rate everybody is living from hand to mouth and making nothing from sugar because they are all preparing for what is going to happen in the next war. In time of war they would be invaluable. That is why they are protected.

Dr Matthai —In that case your real implication is that the protective duty should continue without limit of time?

Mr Wynne Sayer —If we are going to exist in India we have got to go into line with other countries. We have not got the natural advantages that places like Cuba and Java have got and at the same time we have got to face the fact that if there came a war both Cuba and Java would be completely out of it as producers.

D. Matthal —What is the point of the statement later on in the same paragraph "The increase of cane going direct to factories in the East and West Gander tracts has been most marked in the last few years" What do you mean by direct to factories

Mr Wynne Sayer —We call making sugar direct from cane "cane going direct to factories"

President —You mean direct production of sugar?

Mr Wynne Sayer —You can crush cane and you can send the material to a refinery and it goes into the sugar We call cane crushing the direct method

D. Matthal —In answer to question 13 you say "The control of an area of land adjacent to the factory is in my opinion very important" All the factories that you have in this area I suppose have their own lands?

Mr Wynne Sayer —No

D. Matthal —What is the general practice?

Mr Wynne Sayer —The general practice now is not to have your own land In the old days the practice was to have it The following factories have their own lands—

Padrauna,
Sardainagar,
Purtabpur,
Marhowrah,
Babnowhe

We have on the other side Samastipur, Barah, Japaha and Purnea which have their own lands Lohat and Royani have virtually no land for growing cane I should say 50 per cent have their own land

D. Matthal —On an average I suppose about 100 acres under cultivation?

Mr Wynne Sayer —No Sardainagar has a very large area of which about $\frac{1}{3}$ is under cane on a three year rotation, Purtabpur is the same Samastipur has I think at Dawlatpur about 1,000 acres, Barah will have over 2,000 acres, Japaha will have about 2,000 acres and Purnea possibly about the same

Dr Matthal —May we take it that about a third is under cultivation?

Mr Wynne Sayer —Yes

D. Matthal —I find in one or two cases of the total area only a very small proportion was under cultivation, because they thought it better to buy their canes

Mr Wynne Sayer —Not so Japaha, and Purtabpur could supply themselves to a great extent Marhowrah has got in estate of its own Sardainagar is running its mill on its own estate

President —You say the majority of factories do not attempt to take up land

Mr Wynne Sayer —They can't get land

President —It is not that they think it cheaper or preferable to buy cane from the raiyats

Mr Wynne Sayer —Every factory would acquire land It is most important for two reasons first and foremost if you were to get anything in the nature of a railway strike or a bad smash at an important place in the railway line, breakdown of a bridge or something like that, you can keep going Again you have got the possibility of growing on your estates an early ripening cane like Co 214 which pays the mill and doesn't pay the grower as well as other canes do Samastipur is working Co 214 and getting $8\frac{1}{2}$ per cent in November It did get 9.2 per cent two years ago in November The ordinary factory dependent on the raiyat's cane would have the greatest difficulty in getting 7 per cent

Dr. Matthai — Co 214 is a very fibrous kind of cane

Mr. Wynne Sayer — Yes. It is nevertheless a very good cane, but it is not a good tonnage cane. The difficulty is that the ryot will not grow it. It is a very valuable thing to have your own estate grown cane. When you have a slight breakdown in the factory you have got to stop all the cane. When you are all right again, you will. It means that everybody on receipt of the wire will start working and you would get your cane within 24 hours. The result is that until after 14 days after the breakdown you cannot start working. That means every day you are losing 1,000 maunds sugar. But if you have your own local crop, the moment your engineer says "the factory is ready to work, please send out your coolies and start cutting your cane" and it saves you a whole day.

Dr. Matthai — On the question of extending the working season I suppose as a practical question the only possibility of extending the season is by opening it earlier.

Mr. Wynne Sayer — Yes in my opinion. Other people will tell you that by prolonging irrigation you may get the cane stand on. My own experience is not favourable to that.

Dr. Matthai — Why?

Mr. Wynne Sayer — Because I find it depends on the nature of the hot weather. If you get west winds very early and you irrigate 100 acres of land in the middle of 10,000 acres which is not irrigated, you simply increase your percentage of evaporation. You don't get the benefit of the irrigation.

Dr. Matthai — The earliest I suppose that you can start is about the middle of November.

Mr. Wynne Sayer — You can start if you get the cane on the 1st of November.

Dr. Matthai — And go on till the 15th March?

Mr. Wynne Sayer — Go on to the end of April.

Dr. Matthai — Your dry winds start much earlier than that.

Mr. Wynne Sayer — They do, but I will risk it, because your cane may be light, but the percentage of sugar is tremendous. The grower grumbles tremendously. If you take 2 lakhs of maunds of cane from one man he cannot grumble if you leave 20,000 maunds standing on.

Dr. Matthai — Apart from this question of dry winds, isn't there a traditional objection on the part of the growers to allowing their canes stand on the grounds after March?

Mr. Wynne Sayer — There is the traditional objection like everything else in India. These things can be overcome.

Dr. Matthai — Is it being actually overcome?

Mr. Wynne Sayer — I think so.

Dr. Matthai — Does that mean paying them more for their cane?

Mr. Wynne Sayer — Generally, because you pay so many annas per maund. The man when it comes to cutting his cane in April is delivering you far less given tonnage in comparison with the amount of sugar he is delivering than at the beginning of the season.

Dr. Matthai — Have you any figures? We have got the figures for the Begg Sutherlands here. As regards the other factories here, what is the working season?

Mr. Wynne Sayer — Factories will tell you when they start. I should say 110 to 120 days. December, January, February and March are a pretty good definition of a working season.

Dr. Matthai — What is the average working season in Java?

Mr. Wynne Sayer — May to November. All your cane is cut and crushed in rotation. The fields as they go in rotation are cut. Every field is planted with a different cane or at a different time, and the plantings are all

placed in rotation on a wheel which shows everything on the manager's table

President —In answer to question 39 you say "Of late years the United Provinces and the Province of Bihar and Orissa have absorbed a large quantity of the sugar which used to go the Punjab"

Mr Wynne Sayer —Punjab and Rajputana markets are now taken over by imports through Kathiawar

President —What about the customs barrier?

Mr Wynne Sayer —It has not stopped sugar coming through Kathiawar Ports and competing with that from Bombay and Calcutta

Dr Matthai —One suggestion that we heard was that the duty was collected in Kathiawar all right, but they don't have to pay it till six months after clearance. So they save the interest

Mr Wynne Sayer —That and the shorter haul would tell in its favour in some parts but it would not make such a difference in the price in the Punjab

Dr Matthai —What is your latest estimate of imports other than British imports?

Mr Wynne Sayer —137,000 tons

Dr Matthai —That is for 1929-30

Mr Wynne Sayer —Yes. For 1930-31 it would be rather higher

Dr Matthai —Could you send us the exact figure for 1930-31?

Mr Wynne Sayer —Yes

Dr Matthai —If your estimate for the current year is somewhere about 150,000 tons and we import 850,000 tons into British ports

Mr Wynne Sayer —930,000 tons is about the figure

Dr Matthai —How do you estimate that?

Mr Wynne Sayer —Every year there is an increase in the imports of white sugar into India of about 50,000 tons

Dr Matthai —Can you tell me how your estimates have tallied with the actuals?

Mr Wynne Sayer —As a matter of fact Fraser Eaton used to write and ask me as to the amount of sugar British India would import. We calculate on the basis of the price. The price is virtually stationary. The idea is if you drop the price by a rupee or two, you are going to increase the consumption

Dr Matthai —Actually on the quantity purchased by the individual consumers it makes very little difference

Mr Wynne Sayer —It doesn't increase the price at all, but there is a steady increase in the amount that you utilise. The increase is between 50,000 and 60,000 tons every year. Last year there was a funny little drop in the Java imports due to the fact that the Java exporters wanted higher price. In the meantime beet sugar came in at the cost of Java imports. It is always extremely difficult for any merchant to enter into large forward contracts on a falling market. He would be foolish if he did. Therefore all purchases are from hand to mouth. That has an extraordinary steadying effect on the amount of sugar that comes in. A lot of people say invisibles all vanish. Invisibles do vanish on a falling market. We do not know. There may be a great jump when those invisibles come to be filled up which of course will be the case directly sugar takes upward turn

Dr Matthai —That is to say if shipments since April to October are slow, it will be completely made up between October and April

Mr Wynne Sayer —You will be very much amazed by the extraordinary way shipments have jumped up lately from Java

Dr Matthai —Taking your estimate of 920,000 tons for the current year and adding the Kathiawar imports, you get 1,100,000 tons

Dr. Matthai—In answer to question 46 you say "The Indian manufacturer has a distinct advantage with regard to organisation of selling arrangements." What precisely is the point?

Mr. Wynne Sayer—No attempt is made to sell the Indian factory sugar through one hand.

Dr. Matthai—It is not a permanent handicap by any means. At present each factory has more or less a proscribed market. You don't need a very elaborate organisation for the purpose.

Mr. Wynne Sayer—What do you mean "proscribed market"?

Dr. Matthai—Take for example a factory like Champain. Take the Bogg Sutherland Group. They have been selling so much in the United Provinces and so much in the Punjab. About 70 per cent of their sales are in the United Provinces.

Mr. Wynne Sayer—It is a very curious thing. The Ryan factory which is totally isolated sells a very large portion of its production at its own gate.

Dr. Matthai—If they can do that.

Mr. Wynne Sayer—There is no reason why they should. They have no big haul.

Dr. Matthai—How does that happen?

Mr. Wynne Sayer—Simastipur does not do it. Ryan curiously enough sells a large portion of its output at its own gate and in increasing quantity. No one knows why. The result is that Ryan sales have been extraordinarily favourable because when a man turns up with 20 bullock carts and takes away from your mills gate at that figure, you are saved all expenses of selling.

Dr. Matthai—But then the Indian sugar factories so far have been able to sell the whole of their output at a price which represents the import price plus a certain freight advantage.

Mr. Wynne Sayer—The point is this that a great deal of Indian sugar is sold forward notably by some of these Indian factories at a low figure to obtain finance at the beginning of the season. If the selling arrangement was in the hands of one, these factories could obtain a proper advance against their crop.

Dr. Matthai—What kind of factories are you thinking of?

Mr. Wynne Sayer—I mean new factories which are short of working capital.

Dr. Matthai—Have you any definite information about the South African system of dumping duties?

Mr. Wynne Sayer—It is in the note of legislation that I sent you.

President—How is it imposed?

Mr. Wynne Sayer—It is imposed whenever after investigation and report by the responsible official authority, the minister is satisfied that goods which are of a class or kind produced or manufactured in the Union have been or are being exported to the Union at a lower price.

Dr. Matthai—It does not operate automatically?

Mr. Wynne Sayer—The South African Board of Trade and Industries investigates and recommends and the Governor General of the Union of South Africa on the recommendation of the Minister of Finance if he is satisfied issues a proclamation levying the anti dumping duty.

President—They have a declaration at the time?

Mr. Wynne Sayer—They don't import the amount of sugar that we import or anything like it.

Dr. Matthai—I remember reading your note on that question, but I don't think that it makes quite clear the precise arrangement, that is to say it is really in the nature of a suspended duty.

Mr. Wynne Sayer—A suspended duty is meant to meet the case of foreign sugar which without any extraneous help from its country or Government is

found on importation after paying the usual South African Customs duty to be cheaper than the local product. A dumping duty is meant to cover the case of foreign sugar which has received bounty or other artificial help in the country of its origin.

Dr. Matthai—Yes. The amount of the duty has been fixed by the Statute but it does not come into operation till it is established on information collected at the Customs offices that inadequate protection is afforded to the industry which it is the duty of Government to assist.

Mr. Wynne Sayer—Let me read from my Note.

"Dumping Duties"—The principle of a special dumping or countervailing duty was first introduced into the Customs legislation of the Union by Act No. 36 of 1914 (Section 8) and became recognised as a fundamental factor in the economic development of the Union by its inclusion in the Customs and Excise Amendment Act No. 23 of 1929 (Section 12). Act No. 26 of 1925 (Section 18) provides that dumping duties shall be imposed whenever after investigation and report by the responsible official authority, the minister is satisfied that goods which are of a class or kind produced or manufactured in the Union have been or are being exported to the Union (a) at an export price which is less than the domestic value thereof.

Dr. Matthai—This is a different thing.

Mr. Wynne Sayer—I am reading from the whole thing.

Dr. Matthai—The particular provision in the Customs Act under which sugar is charged a special duty is a different thing from that. It is not the usual anti-dumping duty. The anti-dumping duty operates in cases where the f.o.b. prices are lower than the current internal prices. This is a suspended duty.

Mr. Wynne Sayer—Dumping duties were imposed on sugar.

Dr. Matthai—The dumping duty was abolished when the suspended duty was brought into force. The suspended duty applies to sugar and bent wood chams. In the proclamation that they issued about it, it was said that the anti-dumping duty hitherto imposed on sugar was abolished and in place of that a suspended duty would come into operation. Dumping is rather a wide term. Does the Governor General in Council authorise the imposition of the suspended duty? Or is it a subordinate authority?

Mr. Wynne Sayer—No. I think when the Board of Trade and Industries reports and the Minister of Finance is satisfied, the Governor General issues the proclamation.

President—The Ministry there would correspond to the Government of India here.

Mr. Wynne Sayer—Yes, but in quite a different sense. The Minister would be more of the nature of the Secretary of State for India.

Dr. Matthai—Have you any kind of reference book in your office except the South African Year Book to show us the precise operation of the suspended duty?

Mr. Wynne Sayer—I have given you all the information I have gathered from the various documents. I drew up this note specially for you some months ago. Now you refer to this suspended duty.

Dr. Matthai—You might let us know as soon as you get the information.

Mr. Wynne Sayer—Yes. I consider that my automatic duty will operate exactly in the same way as the suspended duty except that I want it to work automatically. Nobody need be notified.

President—As regards your reply to question 8, you say "Deshi sugar is chiefly used in the sweetmeat trade." The Importers in Bombay told us that Java sugar was largely used.

Mr. Wynne Sayer—So it is. Deshi sugar is the chief ingredient in the actual sweetmeat trade in India. It is one of the reasons why it carries with it such a high price.

Dr. Matthai — You mean by *deshi* sugar *gur*

Mr. Wynne Sayer — I mean the sugar which the *khandaris* make

President — Why is that used in preference to Java?

Mr. Wynne Sayer — Because sweetmeats are always regarded as a *deshi* thing which can be safely taken by any person of high caste

President — Do you consider that the sweetmeat trade is a very big trade?

Mr. Wynne Sayer — Yes

President — It must use very much more than the production of *khandaris*

Mr. Wynne Sayer — Yes

President — Do they use *gur* in the sweetmeat trade?

Mr. Wynne Sayer — To a certain extent but not to produce high class sweets. What we find is this. I think that the factories seconds are used a great deal more. I know that Java sugar is also used. It is one of the chief adulterants.

Dr. Matthai — You would say that the bulk of the demand for white sugar in India comes from the sweetmeat trade?

Mr. Wynne Sayer — No. You mean the bulk of the demand for Java white sugar, don't you?

Dr. Matthai — Yes

Mr. Wynne Sayer — I don't think so

Dr. Matthai — We don't consume 1 million tons of sugar in India in tea and coffee

Mr. Wynne Sayer — We consume 1 million tons in tea and coffee in various forms and means. I don't think that the sweetmeat trade is anything like so dependent on Java sugar as people make out because consumption per capita is very small and in every household many preparations involving the use of sugar are made frequently in India.

President — Apart from the use in sweetening tea, coffee and other drinks and sweetmeat trade, what other uses could there be? In what is it used?

Mr. Wynne Sayer — It is wasted in consumption.

President — What about hornets? We were told by one factory that 80 maunds of sugar could be consumed by hornets?

Mr. Wynne Sayer — Quite easily

President — What about aerated waters?

Mr. Wynne Sayer — Sugar is used there. A tremendous amount is also consumed in ice creams, puddings and things of that sort.

Dr. Matthai — My reading of the situation is that most of the *gur* is used in making sweetmeats in one form or another in the villages.

Mr. Wynne Sayer — Yes. *Gur* is used in flavouring food and various other mixtures. A great deal of *gur* is also eaten. But even in villages men with means prefer sugar and do use it.

Dr. Matthai — The consumption of *gur* is fairly stationary, if not going down.

Mr. Wynne Sayer — I think so.

Dr. Matthai — If that is so, a natural increase in the consumption of sweetmeats must mean an increase in the consumption of white sugar.

Mr. Wynne Sayer — Yes.

Dr. Matthai — Therefore the great periodic increase that we are having in the consumption of white sugar is an increase really in respect of sweetmeats.

Mr. Wynne Sayer — No. I disagree with you. It is, due to the gradual displacement of *gur* or sugar in Indian household. The increase we are having in the use of white sugar consumption is a little gradual and white

sugar is being spread into every place. When I first came out here if I wanted white sugar I would have to order it specially. But now the *bania* has it in stock.

President—What do they use it in? They cannot eat white sugar?

Mr Wynne Sayer—They use it in tea and other drinks. When they use it in tea, they put in by teaspoonfuls. They mix it with puddings. You can be perfectly certain of this. There may be a certain amount of waste. But it is not deliberately thrown away or anything like that. If the sweetmeat trade has ever been dependent on *gur* or *deshi gur*, we would say at once that the sweetmeat trade is increasing. How is it then that the demand for *deshi sugar* and *gur* does not increase? It is perfectly stationary.

President—The demand of the sweetmeat trade has not gone up?

Mr Wynne Sayer—Not particularly.

Dr Matthai—One reason why *gur* is being given up in the sweetmeat trade is it is worth while having a kind of sugar that will keep for making sweetmeats and *gur* does not keep.

Mr Wynne Sayer—That is true.

Dr Matthai—White sugar does?

Mr Wynne Sayer—Yes.

Dr Matthai—The more it is realised the more would the white sugar go into the sweetmeat trade?

Mr Wynne Sayer—Yes.

President—They told us at Nellikuppam that the sweets made of Java sugar would not keep whereas those made with their own sugar would keep.

Mr Wynne Sayer—A lot of Java sugar won't be taken in England by those who are accustomed to use refined sugar.

President—Why?

Mr Wynne Sayer—You have only to compare it with the best sugar to see it. It is not white enough.

Dr Matthai—You think that the increase in the duty on inferior sugar of Rs. 180 has been quite sufficient to prevent the import of *gur*?

Mr Wynne Sayer—Yes. There has also been a drop in the price.

Dr Matthai—That is not clear from your figures?

Mr Wynne Sayer—But I think there has been a drop in the prices of Bombay.

President—That is true.

Mr Wynne Sayer—It has frightened them. The Java *gur* trade is mostly dependent on the price of *gur* in the large towns.

Dr Matthai—The point that Mr. Clarke makes is that the effect of the fall in the price of sugar is directly seen in the price of first class eating *gur*. Taking Decann and Meerut as representing the first class eating *gur* in India, those prices have fallen in accordance with the fall in the price of sugar.

Mr Wynne Sayer—You mean that the demand for first class eating *gur* would alternate with the demand for white sugar?

Dr Matthai—Yes.

Mr Wynne Sayer—That is because of the adulteration. They buy Java sugar and make it into *gur*.

Dr Matthai—That is more likely.

President—A high caste man would not take white sugar in preference to *gur*, would he?

Mr Wynne Sayer—No. If he is thoroughly orthodox.

President—Would not he take imported white sugar in place of eating *gur*?

Mr Wynne Sayer—No, not as such but he would take white sugar worked into *gur*. The reason for the cheaper *gur* is this adulteration.

President —We were told in Bombay that Banavut gur was made in those seasons of the year when the price of gur went up

Mr Wynne Sayer —Did they agree to the fact of adulteration?

President —Yes In Bombay one or two factories make sugarcandy and whenever the price of gur goes up they make gur

Mr Wynne Sayer —That is it

Dr Matthai —In spite of the fact that the import of inferior Java sugar corresponding to gur has practically stopped with this new duty would you propose that whatever duty was imposed on high class sugar should be imposed on all classes of sugar?

Mr Wynne Sayer —Yes We cannot afford to raise the sugar question again and again, if we do we are going to cause difficulty We do not want this inferior sugar, you should stop the whole thing coming in

Dr Matthai —Your replies to questionnaires to local Governments, are these answers all in reference to North Bihar and Gorakhpur?

Mr Wynne Sayer —More or less yes, as far as the agricultural side is concerned

Dr Matthai —In your statement in answer to question 5 to get your margin of profit, that is to say margin of profit on sugarcane as compared to other crops, you have got to make allowance for the fact that sugarcane stands on the ground longer than other crops, that is to say the profit you get on sugarcane of Rs 70 represents the profit that you get over a period of 20 months whereas the profit you get on other crops represents about 8 months

Mr Wynne Sayer —Yes but you certainly cannot get the land ready for chilies, tobacco and ginger twice in 20 months, you cannot get the manure

Dr Matthai —But immediately after sugarcane you can proceed to some other crop?

Mr Wynne Sayer —Yes you can put down maize if you want to

President —I take it your real point is that as regards these alternative garden crops the market is so limited that if you produce those on the scale you produce sugarcane

Dr Matthai —You can sell all the tobacco you raise, can't you?

Mr Wynne Sayer —Who to?

Dr Matthai —The consumption of tobacco is increasing rapidly in the country

Mr Wynne Sayer —But you cannot sell it You have got to sell it through a ring On tobacco in 1928-29 I spent Rs 181 in seedlings and my cost of cultivation per acre was Rs 128 and all that I got for that tobacco was Rs 50, and it may be just as bad this year while in sugarcane I have never been slung like that

President —In answer to question 8, these sucrose content figures are pretty high

Mr Wynne Sayer —These are sucrose in juice We have got no method here of obtaining the sucrose in cane in Pusa Sugarcane is only a part time job and the chemical section has not got a Thwait extractor here You can take the figure of Co 213 and you can drop that figure down by 3 per cent As a matter of fact here in December 16-48 sucrose in juice would be very like if you were running on 12 per cent sucrose in cane

President —The figure we were given in the United Provinces was 11 per cent

Mr Wynne Sayer —That is right

President —You have got very recent figures about the areas under improved cane?

Mr Wynne Sayer —Yes These are all figures returned to me by the various Directors of Agriculture The Bihar and Orissa figures are approximate and I have no means of checking these These are policemen's figures

President—Clarke's is the latest estimate.

Mr Wynne Sayer—Yes. He estimates 511,691 acres under improved varieties in his province during 1930-31.

Dr Matthai—How many forecasts do you get?

Mr Wynne Sayer—Three.

Dr Matthai—Where do you get the United Provinces figure from?

Mr Wynne Sayer—From Clarke.

Dr Matthai—The total acreage under improved varieties in India for 1930-31 is about 800,000, what was it last year?

Mr Wynne Sayer—A little bit less. United Provinces has jumped tremendously.

Dr Matthai—It has apparently doubled.

Mr Wynne Sayer—I do not know.

Dr Matthai—Have you any idea about Bengal?

Mr Wynne Sayer—Co 213 is taking the place of China there and where the Bengal Government has got canals the cultivation of this cane is increasing.

President—We were told that in Bengal where they formerly used to import cane they are now able to export.

Mr Wynne Sayer—Yes. I can't tell you about the figures of the Punjab and Bihar and Orissa. They don't differentiate between canes and they do not say what it is. United Provinces figure is very good but I am very doubtful whether it is all Co cane.

Dr Matthai—May we take your total 800,000 acres as an approximately correct figure of improved canes of all sorts?

Mr Wynne Sayer—Yes, and before you report to the Government of India I will send you the very latest figures. I can give you the last estimate.

Dr Matthai—I cannot for the moment remember whether in one of the papers you have sent us there is a statement of the progress in the cultivation of improved varieties of cane from year to year.

Mr Wynne Sayer—I could send that on to you.

Dr Matthai—Take a period of five years.

Mr Wynne Sayer—These canes came out in 1923.

Dr Matthai—1923 is the earliest date to take?

Mr Wynne Sayer—Yes.

President—It would be very interesting if you could give us figures or a short note showing how the canes spread from year to year.

Mr Wynne Sayer—I gave out Co 213 here originally and I sent it to Bengal also unfortunately it does not appear to be officially recognized that it is one of the best canes for the United Provinces.

GOVERNMENT OF THE PUNJAB (MINISTRY OF AGRICULTURE)

**Oral Evidence of the Hon'ble Sardar Sir JOGENDRA SINGH, Kt.,
Minister for Agriculture, and Mr MILNE, Director of Agri-
culture, Punjab, recorded at Delhi on Friday, the 13th
November, 1930.**

President—Sir Jogendra Singh, you are a Minister of the Punjab Govern-
ment and the subject of Agriculture falls in your portfolio

Sir Jogendra—Yes

President—So that the subject of protection to the Sugar industry is
directly under your jurisdiction?

Sir Jogendra—Yes

President—You were also a member of the Sugar Committee?

Sir Jogendra—Yes

President—The first question I would like to ask is about the importance
you attach to the sugarcane crop in the Punjab. Do you consider it essential
to maintain the present acreage?

Sir Jogendra—The acreage under sugarcane has been between 100,000 and
500,000 acres and it is the only cash crop at present for the cultivator from
which he can meet all his cash demands

President—What about the cotton crop?

Sir Jogendra—The prices have fallen so low that cotton does not count
as a cash crop any more

President—At present the cotton crop would not be an alternative, but if
the cotton prices revived?

Sir Jogendra—If prices revived to something like what they were during
the war then certainly cotton could be called a cash crop

President—The present price is Rs 4?

Sir Jogendra—Yes, for deshi cotton

President—How much was it before?

Sir Jogendra—It was Rs 10 to Rs 12 per maund

Dr Matthai—How long ago was it Rs 10?

Sir Jogendra—I think even as late as last year the price was Rs 10

Dr Matthai—In 1928-29 it was Rs 13-8?

Mr Milne—Yes

Dr Matthai—The highest figure that you have given was for 1928-29 when
deshi cotton was Rs 13-8?

Sir Jogendra—Yes

President—In this 1929-30 cotton, account you take Rs 13-8 and you
got a net profit of Rs 70?

Mr Milne—That is so

Dr Matthai—If you have a price of Rs 10 for deshi cotton then cotton as
a cash crop would be much more important than cane?

Mr Milne—That is a matter of prices of both the crops concerned that
is to say, if the price of sugar remains the same and the price of cotton goes
up then cotton may be the more important crop. Its area is much larger

President—Supposing we took the price of gur normally at Rs 4 to Rs 6
per maund and took the price of deshi cotton at Rs 10, then I suppose cotton
would really be a more paying crop?

Sir Jogendra—The price of *gur* for the whole province has been about Rs 7 and not Rs 5

President—What is the price now?

Sir Jogendra—I think this year it has been Rs 7 per maund. There are certain districts where no *gur* is produced and therefore *gur* price in these districts is higher, the average for the whole of the Punjab is taken three days ago was Rs 7. If the price level remains unchanged for sugar and the price of cotton goes up, then cotton may become a more paying crop, but if the sugar also gets a better price then it would depend on how the prices for two commodities compare with each other.

Dr Matthai—Speaking generally sugarcane is a more steady crop?

Sir Jogendra—It has the advantage over the other crop that it is not as subject to disease as cotton is. For instance we have had within the last ten years, three failures of cotton crop, when the cotton crop gave almost no yield. We cannot say the same about sugarcane. On the average I think I am fairly certain that you can get your sugarcane crop through if you have proper irrigation.

President—Let us suppose that cotton and *gur* prices were at such a level that each crop gave approximately the same return, are there any reasons why you should prefer the sugarcane crop to the cotton crop? For instance one reason that was suggested was that the tops of the cane afforded a good fodder crop.

Sir Jogendra—That does count too, but in general farming it has always been considered sound practice to have mixed crops. We have about 2 per cent of our cropped area under sugarcane and the area is not likely to increase unless better prices can be obtained. This has been clearly demonstrated in the Punjab that the price of produce has a direct effect on the area cropped. When we get a better price for cotton we usually see the area under cotton going up but as soon as the price of cotton drops the area under cotton also goes down.

President—That does not quite apply to sugarcane does it?

Sir Jogendra—Not to this extent, because so far sugarcane is grown on a very small area, 2 per cent of the entire area cropped.

President—One might say that a very large increase in the cultivation of sugarcane is out of the question in the Punjab owing to want of irrigation facilities?

Sir Jogendra—This is correct so far as our present sources of irrigation are concerned. In America they spend a great deal of money on irrigation because it pays them and if sugarcane paid, after meeting the cost of lifting water from deep wells the area under sugarcane will expand.

President—As regards the present area the Punjab Government would be seriously disturbed if there was any considerable reduction?

Sir Jogendra—Yes, very seriously. At present we would view with great concern any decrease in the area under sugarcane.

President—If the forecasts of the Agricultural Department are correct and by the introduction of Coimbatore canes an increase of anything from 50 per cent to 300 per cent is obtained, then taking India as a whole it looks as though the position may be in a few years such that there will be a glut of *gur* in the market and consequent reduction in the price of *gur*?

Sir Jogendra—Yes.

President—In that case the Punjab is perhaps rather better situated than some other provinces because it already imports *gur* to make up its deficiency?

Sir Jogendra—That is correct.

President—So that the problem is perhaps not so pressing in the Punjab, as in other provinces?

Sir Jogendra—Yes. The other limiting factor is the power of the cultivator to crush his cane. Taking an ordinary yield of 300 maunds of cane to the acre it takes a man 25 days to crush it.

Dr. Matthan —If you made the Punjab self-supporting in the matter of *gur* I suppose the utmost extent to which you could increase the acreage under cane would not exceed 10,000 acres

Sir Jogendra —I don't quite follow

Dr. Matthan —The latest railborne figures show that somewhere about 1921-22 you imported about 11 lakhs of maunds of *gur* and you exported about 6 lakhs maunds. That gives you a net import of 5 lakhs maunds of *gur*

Sir Jogendra —I think it is a mistake to take *gur* as separate from imports of sugar. Why not take the consumption of sugar as a whole, refined and raw, that gives you a clear indication of what the demand is in the Punjab for sugar. I don't want to treat them separately

Dr. Matthan —How much do you think is the consumption of refined sugar in the Punjab?

Sir Jogendra —I shall have to look it up

Dr. Matthan —I find that your Deputy Director of Agriculture gives it at somewhere about 75,000 to 80,000 tons

Sir Jogendra —The fact is that accurate figures are not available. We have to depend on the information we collect from the inland trade returns and it is very difficult to trace what has been consumed in the Punjab and what has gone to the North West Frontier Province, but you might take it that the population of the Punjab is 20,687,000 and the standard of living is higher than in other provinces, and you can take the present and future consumption on the same basis as in other countries, because in the Punjab they have three meals a day, they have milk, they have their tea and they use sugar, so I don't expect that within any time there will be a glut of sugar in the Punjab

President —There might be a glut of *gur* as such, not of sweet stuff

Sir Jogendra —I won't say that, because I don't contemplate that we are going to be altogether unprogressive, we hope to make more refined sugar, and save an enormous amount of money which we are losing by not making sugar by modern method

President —That was the next point I was going to suggest, that if there is this large increase in the output of cane which, if turned into *gur*, will give a glut of *gur*, it would be necessary to find some other outlet for the cane, that is to say manufacture white sugar

Sir Jogendra —Yes. The demand for white sugar has to be met by practically three provinces, Bihar, United Provinces and the Punjab

President —The problem does not appear to be quite so pressing in the Punjab considered by itself because you have got this deficiency in *gur* so that you can still continue to introduce your improved canes for a few years, you have more breathing space than other provinces. For instance if there is no increase in the number of sugar factories Bombay might be in a serious position. It might be flooded with *gur* from the United Provinces. But the position in the Punjab would not be so bad

Sir Jogendra —I don't think so, for we can produce *gur* almost as cheaply as United Provinces, of course the cost of production in Bombay is higher

President —That is true also of Southern India

Sir Jogendra —There also the cost of production is much higher

President —What is the reason for the fall in the acreage? It has fallen to 800,000 acres

Sir Jogendra —I thought it was nearly 400,000 acres. Sometimes deficiency of rainfall at the time of sowing or canal closures and things of that kind operate. We have to plant the sugarcane crop in March and some areas depend entirely on rain. Gurdaspur is one of our big sugar producing districts and sows a large area, which has to depend on rain

President —Last year how much was it?

Mr. Milne —806,000 acres in 1929-30

President —There was a big drop from the year before?

Mr Milne —Yes

President —Is that due to climatic reasons?

Sir Jogendra —Yes I may say that our figures are accurate so far as the area is concerned

President —But not about the outturn?

Sir Jogendra —No

Dr Matthai —How do you get the outturn of *gur*?

Sir Jogendra —Estimates are prepared

Mr Milne —The civil revenue staff send in their estimates, and then I have a number of Agricultural Department people working quite independently in the districts who also send in estimates. These two separate sets of estimates come to me, and on these and other information I fix the estimate of yield

Dr Matthai —That is to say once you get the figure of acreage, you simply apply a certain proportion

Mr Milne —The yield is taken quite separately

President —Every year?

Mr Milne —Yes I have got experienced men in the department. If there is a big difference between the estimates of the civil people, and those of my own people I ask an explanation from both parties. When they all agree we simply go on. I hope it is clear that we have got two separate sets of estimates on which to base the yield forecasts

Dr Matthai —On the whole the proportion works out to about a ton per acre?

Mr Milne —Yes

Sir Jogendra —This includes a fairly large area which is rained

Mr Milne —About 18 per cent

Sir Jogendra —That lowers our average yield enormously

Mr Rahimtoola —I suppose you have read the Fiscal Commission's Report?

Sir Jogendra —I read it long ago

Mr Rahimtoola —There you will find the conditions that are necessary to be fulfilled before any Government can ask for protection and a case can be established in this connection

Sir Jogendra —I think, in our letter, as far as I remember, we put it clearly that the conditions set forth by the Commission were met. Personally by conviction I am a free trader. But I can be a free trader in a world, in which all countries are trading freely. When you take the position of sugar you find that there is no country in the world that has not protected this industry. I think I can make that statement without any reservation. Every country in the world in the matter of sugar has sought protection and subsidies and the last to subsidise was England. I asked your Secretary if he could tell me the exact amount—it runs into some millions of pounds—that England gave to foster beet sugar industry. If he hasn't got it, I will send you these figures later. I think Japan has put in over 1,000 million of yens, not to say anything about the United States of America, South Africa, Austria, Germany and France. That is to say all the other countries of the world have been protecting the sugar industry and pushing it. We in India have allowed them to dump down their sugar on us without seeking any protection. This is not business. Supposing we had two fields in the same neighbourhood. I am growing cane in one and you are growing cane in the other. You put in hedges and protect your crop and I have my field unhedged the result would be that my field would be ruined. I repeat again. This is not business. To me protection is more a matter of practice than of principle. You may believe in the sermon on the mount. But in the work a day world you may find that you have got to protect yourself. I think we have been extremely wrong in not defending a large sugar producing country like India with an area

ranging over two million acres of sugarcane—with the established fact that if we make sugar we can be altogether independent in the matter of our sugar requirements. When I say we need protection to foster this industry I want to make another point clear. It would be no use putting on a protective duty unless we can use the income we get from it in establishing sugar factories. What we need is refined sugar and refined sugar is not going to be produced unless the State directly subsidises the building up of modern sugar refineries. If, for instance, Government decided that India should be independent in the matter of sugar production in five years they can do so, lay out a programme and carry it out. They will only have to decide to put up 200 sugar factories producing 4,000 tons of sugar in 5 years and in 5 years' time we shall be independent and import no more sugar. About 400,000 acres of sugarcane will give us all the sugar we at present use.

Mr Rahimtoola—What is the exact kind of protection you want?

Sir Jogendra—I don't follow the question. The Fiscal Commission laid down three conditions. So far as the first condition goes sugarcane has natural advantages. It is proved that for the last 2,000 years sugarcane has been grown in India and I think sugarcane was taken to Java and to other countries from India. So far as some of the natural advantages are concerned India enjoys them. As regards the second condition that protection must be essential to safety that point I have made clear. Without protection it is impossible to establish sugar industry in India. The third condition is that the industry must be able in time to face world competition. As I said before I am a free trader and being a free trader I want protection only till India can face world competition and then India may contribute to the well being of the world in the matter of supply of sugar.

Mr Rahimtoola—You think the last point is fulfilled that it will be able to stand on its own legs after a certain number of years and can face world competition without protection?

Sir Jogendra—Entirely. Before the Sugar Committee furnished its report Tatas started a Sugar Corporation with a capital of Rs 5 crores. I was on their Board. Then we got Mr Noel Deerr who was familiar with the thick canes which he had seen in West Indies. He went round Punjab, United Provinces and Bihar and came to the Board and said that Indian canes are absolutely useless so far as production of sugar is concerned.

Dr Matthai—How long ago was this?

Sir Jogendra—That would be about 1920-21. Then Noel Deerr joined Messrs Begg Sutherland Company and had to deal with these contemptible canes which he thought were unfit for producing sugar. He will when he appears before you, tell you that he has changed his opinion and that indigenous cane gives good yields of sugar. Even the most contemptible variety which so far as the production of sugar is concerned, gives its share of sugar. As I am on the point I may tell you another experiment which we made in the Punjab. When I took up office in the Punjab, the opinion was strongly held that sugar could not be produced from the Punjab sugarcanes. I could not convince people by merely arguing. So I said 'you have got sugarcane and we have got the mills in Bihar. Why not send a few wagon loads of sugar cane to the mills in Bihar and get the sugar made?' I put one of my Deputy Directors on to this and we sent a few wagon loads to Messrs Begg Sutherland's factory at Samastipur. The result was that our cane yielded more and better sugar than the Bihar cane and we got some bags full of sugar and placed them for exhibition.

Dr Matthai—How many days did it take to transport?

Sir Jogendra—8 or 4 days.

Mr Milne—We had special arrangements with the railway.

Dr Matthai—Do you remember what kind of extraction you got?

Sir Jogendra—I think the indigenous variety gave a better yield than the Coimbatore variety.

Dr Matthai—Did you get over 9 per cent?

Sir Jogendra—Yes. I will send you the report when received from the Manager of the factory.

Mr Hakimtoola—You mean the report of Begg Sutherland Company?

Sir Jogendra—Yes, it is in the bulletin, page 79 (handed in).

Dr Matthai—That is your best indigenous cane—katha?

Sir Jogendra—I can account for the difference in yields. Coimbatore canes are late ripening, whereas indigenous canes ripen early. What happened was we sent all the canes at one and the same time. The yield on the Coimbatore cane was much less, because they were not fully ripe.

Dr Matthai—If you took katha cane and had it worked up into sugar in a factory in the Punjab, would you be able to get the same extraction or is there any difference in conditions? That is to say you have got this made into sugar in Samastipur.

Sir Jogendra—Yes. We shall get the same results as at Samastipur.

Dr Matthai—Supposing you got it done in the Punjab would there be any difference in the circumstances which might affect the extraction?

Sir Jogendra—The extraction might be a little better because no drying will take place. So far as the chemical composition of the sugar is concerned, that may be a little better too, because if cane is in transit for a long time it acquires a certain amount of acidity which causes the formation of glucose.

Dr Matthai—Mr. Nool Deeri takes a rather lower extraction percentage.

Sir Jogendra—It is general practice to be on the low side in estimating. It is only in recent years that Begg Sutherlands have got their higher percentage and that is due partly to the use of multiple mills. The Sonapat factory is equipped with 17 rollers. So I think we ought to have a very good extraction.

Dr Matthai—Would you go so far as to say that within a reasonable length of time it will be possible for Indian factories to produce sugar at a cost approximate to Java cost?

Sir Jogendra—The trouble is no one knows the Java cost. When the Sugar Committee sat we calculated the cost of cane at about 6.6 annas per maund. Since then they have improved the production by about 50 per cent. If you distribute this they may have lowered their price by about 25 per cent.

President—Then our price is less than Rs. 4 per maund in Calcutta.

Sir Jogendra—It is very difficult to find at what price Java is delivering it.

President—I take it your general view as regards the third condition is that provided the protection granted to the Indian industry is not in excess of the protection granted in other countries, that condition is fulfilled.

Sir Jogendra—Yes. For instance, if they have a sort of dumping out subsidy, Java would sell its produce at a higher price to some countries, make its profit there and put the surplus in another market at a cheaper price.

President—Actually the reverse has been the case. They sell dearer in India and cheaper in other countries.

Sir Jogendra—Yes.

President—As regards the actual details of protection you suggest that a lower duty should be imposed on the brown sugar than on the white.

Sir Jogendra—Yes.

President—Do you stress that at all?

Sir Jogendra—No, I have no strong views. It is a matter on which you are the best judge.

President—You would not object for instance to a duty being imposed at the same rate on white sugar as on other sugars with the object of protecting the *gur* industry against the imitation or manufactured *gur*?

Sir Jogendra—So far as I am concerned not knowing much about it, I would like a prohibitive duty.

Dr Matthai—A prohibitive duty on all classes of sugar?

Sir Jogendra—Yes, on molasses and everything

President—About the period of protection, what is your view?

Sir Jogendra—It is very difficult to determine it

President—Yes, it is very difficult. We have many suggestions. One is that the protective period should be for 25 years and another for 15 years.

Sir Jogendra—I am for 10 years. I think protective duties in any country should be revised as frequently as possible, to see how far free and fair trade can be promoted.

Dr Matthai—How exactly would you provide for the period? Would you say the duty is to expire at the end of ten years or it is to continue until there is to be an enquiry at the end of ten years and on the results of that enquiry it would depend?

Sir Jogendra—It is not a point on which I could express any definite opinion. Ten years after all is a long time, the duty should continue till another enquiry has been held at the end of ten years.

Dr Matthai—The practical importance of it for the Sugar industry would be this. Supposing you had a sugar factory?

Sir Jogendra—If the Government gave me all the money they got out of this duty, in ten years I would have India independent in the matter of sugar production.

President—I understand whatever duty is imposed, you have very definite views as to the utilisation of the proceeds.

Sir Jogendra—In a very interesting contribution to the Simon Commission Report, Sir F. Layton outlines a scheme about what he calls provincial excises. If any duty is now imposed in the matter of protection to sugar industry, the whole of this duty should be collected by the Central Government for the benefit of the provinces and distributed on the basis of area in each province under sugarcane to be used for no other purpose but for fostering the establishment of sugar refineries, scientific research and cultivation of sugar cane.

President—Let us take the first point—the fostering of factories.

Sir Jogendra—Yes.

President—Some sort of co-ordination would be necessary, would it not otherwise you might get Bombay establishing half a dozen factories which would at once be knocked out by competition from the United Provinces?

Sir Jogendra—I think that it is a matter which the Sugar Board can look into.

President—Something will have to be done through the Imperial Council of Agricultural Research?

Sir Jogendra—Yes. They can have a Sugar Board of their own. The only thing is that there should be no inter-provincial competition.

President—The contribution would be in the first place to the Imperial Council so far as that is concerned?

Sir Jogendra—Yes.

Dr Matthai—The markets would have to be delimited—I mean the market for each factory or for each province. The point is this. Supposing you had subsidised factories in the United Provinces cutting into the natural markets of the subsidised factories in the Punjab—that kind of thing could be prevented only by a central organisation.

Sir Jogendra—Don't you think that we could have a sort of constitution in the same way as Java has, viz., a Sugar Board, and that it will co-ordinate the whole sugar manufactured in India and on a co-operative basis pool their output?

Dr Matthai—As far as the Java Trust is concerned, the Java Trust has no kind of control over the working of individual factories.

Sir Jogendra—No.

Dr. Matthai — I should like to know precisely what are the functions of the Sugar Board that you contemplate?

Sir Jogendra — I am afraid, it will take some time for me to define the functions.

Dr. Matthai — Would it concern itself only with the question of marketing or with the question of production as well?

Sir Jogendra — Both production and marketing.

Dr. Matthai — Would it control both?

Sir Jogendra — Yes. I am again expressing no definite opinion because the subject is a very big one. Until I have carefully examined the subject I do not wish to express any opinion on this.

President — You would limit your proposal to the utilisation of a portion of the proceeds?

Sir Jogendra — The whole of it.

President — I was going to say 'a portion of the proceeds for the establishment of factories in different parts'.

Sir Jogendra — Yes.

President — The remainder would be utilised for what?

Sir Jogendra — On the agricultural side.

President — Technological research, demonstration, establishment of cane farms and such things?

Sir Jogendra — Yes.

President — In that connection there is one rather important point, viz., the actual trying out of the varieties grown at Coimbatore. They have been tried under tropical conditions at Coimbatore but further trial is necessary in Northern India.

Sir Jogendra — We have got it already.

President — To what extent do you consider that that should in the first place be conducted by some representative of the Coimbatore Research Station?

Mr. Milne — Not necessary at all.

President — Would you prefer that to be done entirely by the Provincial Government?

Mr. Milne — Yes, for this reason. The man on the spot always knows his local conditions and requirements best. We can get far more information out of our own Government farms than from any zamindar farm for the reason that we know the past history of the plot, the value of the land, what crop was there before the manures applied in previous years, what is being done, etc. We are in a position there with our skilled staff in attendance to detect anything which may interfere with the growing of that crop or its maturity. For example, somebody may forget to water a plot at the right time or some insect pest may come along, and partly destroy the crop as we are hearing is the case now in Benepat. All these things have to be spotted quickly and allowed for in comparing the yielding qualities of different canes. Supposing you are comparing two varieties and one particular plot is attacked and the other not it will at once make a big difference in the yield of these two, and if there is nobody to detect what is really happening, we might come to a wrong conclusion as to the relative values of these.

Dr. Matthai — Would not you want some kind of co-ordination between the man who does the breeding and the man up here?

Mr. Milne — We have a competent staff to deal with that and we are better able to choose varieties which will fit our needs.

Dr. Matthai — We noticed at Coimbatore that the Sugarcane Breeding Expert rather took the line that over sub-stations where seedlings are being raised he ought to have a certain amount of control because he is the man who would benefit by whatever results you might obtain.

Sir Jogendra — As a matter of fact it has been decided to start a farm at Kainal under the Coimbatore Expert.

Dr Matthai —Is that under the Coimbatore Expert?

Sir Jogendra —A farm is being established under the direct supervision of the Coimbatore Expert

President —Then you will have your own farm afterwards?

Sir Jogendra —Yes

President —That is what I mean

Sir Jogendra —That is done

President —(Otherwise it is very difficult for the experts in Coimbatore to ascertain progress

Sir Jogendra —We have the Coimbatore Cane Expert coming round to see our farms

President —I know he does occasionally

Mr Milne —We welcome that sort of thing

Sir Jogendra —Take Java. They employ 50 European experts on the agricultural side alone and we have only one Coimbatore Expert

President —You consider that in your own province there is room for considerable expansion in the matter of both experiments and demonstration?

Sir Jogendra —Yes, there is

President —I was just going to ask what sort of financial provision should be made in that direction?

Sir Jogendra —I could easily spend Rs 20 lakhs a year

Dr Matthai —How is the karnal substation financed?

Sir Jogendra —By the Imperial Council of Agriculture

Dr Matthai —Entirely?

Sir Jogendra —Yes

Dr Matthai —What is the provision that they have made for it?

Sir Jogendra —I am very bad in remembering figures. I could not tell you at the moment

President —You say you could utilise Rs 20 lakhs a year in that direction?

Sir Jogendra —I could utilise much more. If I am to subsidise factories I could easily spend Rs 1 crore

President —It is just as well that the Finance Member has not come back from leave!

Sir Jogendra —The Finance Member, if he wants his coffers to be full, must put money in development. The danger at the present moment is that our development might be stopped because there is financial stringency. On the other hand, this is just the time when we must go ahead with the developments if we are going to save the position.

President —If Government approved any proposals that we might make, do you think it desirable that in the legislation some clause should be introduced for making it compulsory on all factories to forward such returns or reports as the Agricultural Departments might require? Do you think that it would be necessary?

Sir Jogendra —If you are going to subsidise the industry you must have all the information you can.

President —It strikes us as we go round the various factories at present they keep their costs confidential whereas an interchange to some extent at any rate of information between factories might result in a very considerable improvement.

Sir Jogendra —I agree

President —Then you would make it compulsory on all factories?

Sir Jogendra —Yes

President —Are there any directions in which you consider that the relations of factories either to Government or to the cultivators should be controlled?

Sir Jogendra —The Java costs are based on a unification of the two interests. The Java system is that the Java factory does not depend on the profits it makes by making sugar only and buying cane. The factory grows its own cane, that is to say the agricultural and manufacturing costs are consolidated.

President —Exactly.

Sir Jogendra —There is only one single cost and one single profit. In India there are, as it were, two costs. The agriculturist has to make his own profit and the factory has to make its profit. So I think there is need for bringing the two interests together and my ideal of the factory—I am still feeling my way in the Sonapat factory—has been that the grower himself should acquire a large block of shares in the factory.

President —On some sort of co-operative basis?

Sir Jogendra —Yes, any factory which is subsidised should be on that basis.

President —Would you mind giving us your ideas on the constitution of Sonapat factory?

Sir Jogendra —The ideal plan of the Sonapat factory has not been realised.

President —The finance is partly that of Government?

Sir Jogendra —We said that we would give them one fifth. My idea was that this one fifth of the capital which Government now holds would be passed on to the cane growers. They will have the shares and after paying 6 per cent, which the Government have thought fit to charge, if there were any further profits, they would be paid to the cane grower who could gradually buy up shares and thus become a shareholder in the company. The cane grower will have to make an agreement that he would keep a definite area under sugarcane for getting the use of the share. For the time being, he becomes a sort of part owner of the share but not entirely an owner till he has paid for it. It is an indirect way of bringing the cane grower into the factory and identifying his interest with that of the factory.

President —So far, that has not been brought into force?

Sir Jogendra —No, for two reasons. The factory has only just been built and it could not make any contracts with the cane growers. Now that the factory is going to start working this season, I am making arrangements with our Co-operative Department to take this matter up with the cane growers. According to my estimate it will take about two years to do it.

Dr. Matthai —Two years to do what?

Sir Jogendra —Two years to make these agreements.

Dr. Matthai —With regard to the co-operative arrangements?

Sir Jogendra —Yes.

President —In the meantime, they would work on purchasing the cane?

Sir Jogendra —Yes.

Dr. Matthai —When you speak of subsidies I suppose your idea is that the subsidy should be utilised in this way?

Sir Jogendra —Yes. But I do not wish to express any definite opinion. The Sugar Board will have to frame conditions which the Local Government will have to fulfil in subsidising the factories.

Dr. Matthai —Do you contemplate subsidies for the erection of factories?

Sir Jogendra —Yes.

Dr. Matthai —That is to say towards the capital expenditure?

Sir Jogendra —Unless you do that you will never make India independent in the matter of sugar. When I say never, I mean not within the next 50 years.

Dr. Matthai —Supposing you had a system of protection which stabilised sugar at a price which was sufficiently attractive for sugar factories, then is it necessary to go further and provide the capital?

Sir Jogendra —I think it is Japan found it necessary England has found it necessary, so has Austria

Dr Matthai —In England the subsidy is rather in the nature of a bounty

Sir Jogendra —More than that I think there is a direct subsidy If you have the Indian Year Book or the English Year Book, you can easily find that out

Dr Matthai —It is a grant every year out of the Development Commission funds

Sir Jogendra —Yes

Dr Matthai —Which really works out in the nature of a bounty

Sir Jogendra —I think there is a direct subsidy I can look up and tell you and if you have looked it up, you must be correct I have not looked up the figures for some time now

Dr Matthai —There is this difference in the case of England There is no protection There is only an import duty which is balanced by a countervailing excise duty and the subsidy is the only protection that they get Supposing you have here a system of protection which enables sugar to be sold in Calcutta at Rs 10 or Rs 10.8 a maund, is it necessary to go beyond that and provide the capital assistance?

Sir Jogendra —Undoubtedly I have every hope that a protective duty will stimulate the capitalists to start the industry, wherever feasible, but I do not want the consumer to be burdened for ever, by not stimulating production of sugar within a limited time by direct State assistance If you agree with me in thinking that India should be made independent in the matter of sugar, there is no other way but to subsidise the building up of factories

President —But I understood your plan to be to subsidise the factories through the growers of cane?

Sir Jogendra —Yes

President —With the idea of securing that they should get good supplies of cane

Sir Jogendra —Yes

President —Your idea is the co-operative arrangement which you were speaking of just now?

Sir Jogendra —Yes

President —In regard to that you have been taking the lead

Sir Jogendra —This will be the first season As I said it would take at least two seasons to establish the contact The peasant is chary about making any agreements He will watch how things are going to work

President —A *sine qua non* of your proposal is that there should be a strong co-operative department in your province and a number of co-operative societies in the area in which the factory is going to be started?

Sir Jogendra —So far as the Punjab is concerned, we have got them Roughly we have one society for every two villages In fact we have slackened down a little Otherwise we would have one society for every village Even now in some villages there are more than one society

President —That presents no obstacles so far as your province is concerned?

Sir Jogendra —No The most difficult thing which Mr Culvert achieved was the consolidation of holdings by consent and not by law

Dr Matthai —What is your view on this? Supposing in the case of a factory like Sonapat the fair price that we postulate under our protective scheme is based on a price for sugarcane which makes it worth while for growers to supply their cane to the factory rather than use it for the making of gur then is it necessary to have this co-operative arrangement? After all the point is whether you have made it worth while for him?

Sir Jogendra —One of the conditions laid down by the Fiscal Commission is that the industry should be able to face world competition

Dr Matthai —Quite

Sir Jogendra —And the world competition can only be faced by a reduction in prices and a reduction in prices is only possible if the interests of the cane grower and of the factory are identical

Dr Matthai —Actually what you do under your system is this You give about Rs 2 lakhs The Government loan is passed on to them They hold the shares You take about 6 per cent out of it for interest and sinking fund charges and they get about 4 per cent on it What it really amounts to is that you are enabling the factory to give a bonus on sugarcane

Sir Jogendra —Yes, it is a compromise You can ask my friend, Mr Owen Roberts, who is sitting there, and he will tell you that Government has not been quite generous to the factory

President —His view is that you should charge no interest on the loan?

Sir Jogendra —Yes But I could not get the money without paying interest

President —Interest has been fixed at 6 per cent?

Mr Jogendra —Yes

President —That is satisfactory from the Finance Department point of view Is there any prospect of extending factories in the Punjab?

Sir Jogendra —A 400 ton factory would require about 50,000 tons of cane in a season Supposing we give you 80 tons of cane to the acre, it means that a 400 ton Factory will require about 1,600 acres of sugarcane We have 500,000 acres under sugarcane so you can see the room there is for factories

President —What about the recommendation of the Sugar Committee that where possible waste lands should be given to factories so that they could grow their own cane?

Sir Jogendra —I am in entire agreement that such grants should be made

President —You mention Sheikhupura district in answer to our question No 88 Is any sugarcane grown there?

Mr Milne —Yes

President —Would irrigation be possible there?

Sir Jogendra —It is irrigated

President —What sort of acreage of waste land at the factory site can be made available?

Mr Milne —There is land which is waterlogged which has to be reclaimed, several thousand acres lie near Chakhanwala in Gujranwala District

President —What is the waterlogged acreage?

Sir Jogendra —About 1,500 acres

President —That would make a good start for a factory, but it would not be sufficient to draw all their cane from when it comes to rotation In Belapur, I think they have 7,000 acres in all and they have 2,000 acres under cane

Sir Jogendra —Yes, three years rotation

Dr Matthai —Would you favour the complete replacement of *gur* by white sugar?

Sir Jogendra —No

Dr Matthai —I suppose your idea is that you should start enough factories in the Punjab to replace imported sugar with indigenous sugar?

Sir Jogendra —Yes and later if people want refined sugar in place of *gur* they can go further and do it

Dr Matthai —So that you have got to find sufficient acreage under cane to yield 800,000 tons of *gur* and the amount of indigenous sugar which is consumed

Sir Jogendra —Yes, you can really produce all the sugar you need by saving up the waste

President —By introducing new canes?

Sir Jogendra —Yes That is a proved fact

President —This question of a zone for each factory which the Sugar Committee spent some time on, that is really of no practical importance in the Punjab, is it?

Sir Jogendra —I think it would be in the Punjab, because we Punjabis are a curious people, as we can overdo things In the matter of cotton ginning factories we have established so many factories that some of them are now starving The same thing might happen in the case of sugar, if sugar manufacture is found paying

President —I suppose if your system of subsidy became general an unsubsidised sugar factory will have very little chance of getting sugarcane from the cultivator so that it is really not so very important for your province as in other provinces?

Sir Jogendra —That is right

President —I suppose as a matter of fact any proposal for introduction of legislation laying down zones for factories would be resisted in your Legislative Council?

Sir Jogendra —I think it would

President —That is a practical difficulty

Sir Jogendra —It is

President —Could you give us an estimate of the average cost of cultivation of sugarcane?

Sir Jogendra —So far we have not got a department of economics in the Punjab and farm costing is a very difficult subject, but we can give you rough figures

President —All we can hope for is a sort of rough approximation based on the information of people who are already in touch with agriculture in the province

Mr Milne —I have got a few figures First of all I would like to tell you that one of our men, Mr Stewart, my Assistant Director, started a system of accounting in the Punjab The work has been published in the reports of the Punjab Board of Economic Inquiry A complete record is taken of what is going on on a particular farm Let me just take the case of our Risalawala farm which is 4 miles from Lyallpur We have a certain number of tenants there and we are in a position to get exact figures from them a detailed account is kept of what is done every day on these holdings separately, including exact records of the amount of fodder that the bullocks eat, the cost of it, etc., and a detailed account of all expenses and incomes These are the most reliable figures we have got, (statement shown and explained, from this it appears that the average wage for a man is about Rs 60 per day the whole year round including idle days, or about annas ten per working day I may mention that the Risalawala figures which I have got here are for irrigated lands of fair quality If the tenant gets 500 maunds of cane it costs him about Rs 125 to raise that cane including rent

President —Rs 25 per acre of rent

Mr Milne —Yes, and the cost of raising a 500 maund cane crop comes to 4 annas per maund of cane

President —What kind of cane is that?

Mr Milne —Thin varieties of canes probably Co 205 It does not really matter which kind of cane this is because we have got his yield

President —Except that if you had improved cane which gave better yield the rate per maund would be lower

Mr Milne —It is really based on 500 maunds of cane of better varieties The chances are that these are Coimbatore canes because we are growing Coimbatore cane at Lyallpur

President—Would we be right in taking the yield on the same land for ordinary country cane at As 6 6?

Mr Milne—If instead of 500 the tenant had got 400 maunds per acre the cost per maund of raising the cane would come to 5 annas, and if 300 maunds of cane per acre were got that would come to about 6 6 annas per maund.

President—We can take it that an enlightened cultivator growing Comba tois cane can produce it at about 1 annas?

Mr Milne—At a meeting I held in 1928, I called for the outputs of our farms at five Deputy Directors' stations—Lyallpur, Gurdaspur, Montgomery, Jullunder and Hansi—and we found there was an average yield of 56 maunds of gur per acre from Co 205.

President—That is really 600 maunds of cane?

Mr Milne—Very nearly. For Co 228 for the same stations except Montgomery the yield was 52½ maunds per acre, so that if a farmer cultivated fair land fairly well he could expect somewhere around 50 maunds per acre, instead of 35 maunds.

President—If we took 1 annas as the initial cost for your cane that calculation makes no allowance for interest on capital?

Sir Jogendra—No.

President—Over Rs 100 which is outstanding for the whole year which he has to borrow?

Sir Jogendra—Interest is taken on his implements and that sort of thing and his cattle. There is depreciation of 25 per cent on cattle a suitable rate for implements and so on.

President—He has got to feed himself in the meantime.

Sir Jogendra—So far as the man himself and his family are concerned their labour has not been taken into account.

President—Take the ordinary cultivator. He is going to cultivate his sugar cane during the year, when the cane is on the ground he has to feed himself, he has to pay for hired labour, he has to pay rent at the end of the year, he has to pay irrigation dues.

Sir Jogendra—We have allowed him a fixed number of days for sugar work but whether that is the accurate way of doing it I cannot say.

President—My point is that most of this money is going out of his pocket, he has got to borrow that at 12 or 15 per cent and you ought to allow something for his interest.

Mr Milne—He has got fair depreciation on his implements, and bullocks.

President—But he is not getting anything for his food.

Mr Milne—This is the actual labour put on the acre of land and if he does labour himself he gets paid for that.

President—In the meantime he has got to feed himself. From the point of view of actual accounting something should be allowed for that. Then there is another point. This makes no allowance for the fact that in a particular year the cultivator may get disease in his crop and there may be failure of rain and so on.

Mr Milne—The account shows the actual happening in the case of particular tenants in a particular set of three years—excepting that I have added a rent as these tenants are working on batar, i.e., these are the actual earnings on a particular set of 6 or 7 holdings.

President—That I realise. What I am trying to do is to get your opinion as to what one might consider a fair price for the cultivator for his cane. Take As 4 to start with.

Sir Jogendra—4 annas for improved canes and 6 6 annas on the old indigenous cane.

Mr Milne—That is about right for cost of raising the crop according to our figures, then I tried with the aid of Mr S. Kartar Singh to work out the costs of crushing and boiling and it comes to about 8 8 annas per maund of

cane I have allowed annas 8 for carting cane from the field to the cane mill but if we don't allow that, the cost come to about 2 98 annas per maund of cane

President — That is roughly Rs 2 a maund of gur

Mr Milne — Yes About 10 maunds of cane are required for one maund of gur

President — That is approximately Rs 2

Mr Milne — With a crop of 100 maunds of cane per acre the costs of crushing and boiling come to annas 98 per maund of cane and if we allow nothing for cartage of cane then the cost comes to annas 2 97 per maund, but the number of days that the farmer employs his bullocks is lessened

President — If you included his labour and his bullocks, how much will it come to?

Mr Milne — Here I am taking Rs 1 12 for a pair of bullocks per day as that is what it actually cost on that holding reckoned throughout the year. We won't get much nearer than that. I have charged for two pairs of bullocks because I have taken a 10 hours day and cane crushing is hard work. Bullocks very often don't work for more than 4 or 5 hours per day in such cases. The cost for bullocks comes to Rs 50 for a crop of 500 maunds cane per acre, Rs 19 14 for a crop of 400 maunds per acre and Rs 30 for a crop of 300 maunds. Here again bullock driver, cane feeder, furnace feeder and gur maker are given 10 annas per day, whereas in actual practice the farmer probably has children of 10 years to 14 years of age employed on the work

President — Will he have two men?

Mr Milne — That depends on his family. I have allowed a man's wage in each case, i.e., annas 10 per day. That comes to Rs 85 for a 500 maund crop of cane, Rs 28 8 for a 400 maund crop and Rs 21 8 for a 300 maund crop. Then I have added cost of cartage of cane. This is a thing that is not in most of the accounts. It may be that the tenant has got the gur boiling furnace on the field so that he has not got to cart the cane any distance, so far as I can see 8 8 annas per maund is the cost of crushing and boiling or if you take away the cartage, 2 98 annas per maund of cane

President — If you exclude his bullocks, what would be the actual out of pocket expenses?

Mr Milne — Take off Rs 50 for that in the case of a 500 maund crop. I have here an article on the cost of crushing cane by bullocks and by power written by Mr Johnson, the Assistant Director at Lyallpur. He gives the cost of crushing by bullock driven mill at 2 6 annas per maund and by power mill Massey 10" x 14" at As 2. We have tried this power mill at Lyallpur and also a Chatanooga Power Mill at Gujra. These are the figures from these mills (Figures shown)

President — Out of this Rs 2 we have to make some arbitrary allowance for the actual out of pocket expenses of the cultivator even supposing he gives his own labour for nothing and his bullocks for nothing

Mr Milne — The costings account would be unfair, if you don't give some remuneration to the tenant for his work and for that of his bullocks

President — Taking the actual market price and working down to what he gets per maund of cane in many parts of the country, it would not be unusual. I don't say that would be a fair price. I say that would be a determining price

Mr Milne — From the data which I have given, this could be worked out

Dr Matthai — We are really trying to find what is a price for sugarcane which would induce the grower to sell the cane to the factory rather than put the lands under some other crop or use it in the manufacture of gur. The point is this: supposing you take all his expenses which have got to be met in cash. You deduct that from his gross earnings. What is left is the return for labour and his profit

Mr Milne — Yes

Dr. Matthai —If that, for example, is greater in the case of sugarcane than in the case of cotton, that tells

Mr. Milne —I think it is much more fair to give the man a fair wage and then compare the net incomes from the different crops

Dr. Matthai —You are perfectly right from the scientific point of view. The whole question is the grower is up against the choice between cotton and sugar cane. The point that has to be settled for him is what exactly is the surplus that he gets over the expenses that he has got to meet in cash

Sir Jogendra —The governing factor is the price of *gur*. It is very difficult to give you a figure. I think in the Sugar Committee they have given a minimum figure of As. 6 per maund for sugarcane. I think in the Punjab the fair price would be 8 annas a maund

President —First of all the determining factor for a sugar factory is the price of *gur*. We have to take the price of *gur* whatever it is and the price of *gur* is the amount which is paid in the wholesale market. We have got to decide how much reaches the cultivator. Therefore you have got to subtract from the price of *gur* the commission and the cost of carriage to the market. Then you have to subtract from that the actual out of pocket expenses of the cultivator in making the *gur* and what is left is what the cultivator gets for his cane. That would be the minimum which a factory will have to pay at the cultivator's door. Then to consider whether that is a fair price for the cultivator we would look at it in a different way. We would consider the cost of production of the cane at 1 annas. We have to allow something in the shape of interest charges on his cash outlay which he has spent in the year. To that we shall have to add some allowance for a bad season and over and above that we shall have to give him some profit and that would give us what would be considered a fair price

Sir Jogendra —8 annas a maund would be a fair price

Dr. Matthai —8 annas at the factory or at the farm?

Mr. Milne —At the factory

President —What is the sort of commission that the middlemen would get for *gur*?

Sir Jogendra —I cannot tell

President —Take a minimum figure for the purposes of exploring the subject

Sir Jogendra —Then put it at Rs. 5 as the average price

President —How much of that would represent the commission which the middlemen gets?

Sir Jogendra —The cultivator gets Rs. 5

President —The difference between that and the market price is what the middlemen gets?

Sir Jogendra —Yes

President —Supposing we take Rs. 5.8 and deduct 4 annas from that, it comes to Rs. 5.4. From that we have to deduct the cost of manufacture

Sir Jogendra —Yes, my out of pocket expenses

President —Say a rupee. That would leave about Rs. 4.4. That comes to about As. 6 per maund

Mr. Milne —When I put it at 8 annas per maund that includes cartage and everything

President —8½ annas is the price which they would have to offer. Probably they would have to offer a little more to make it certain. Something more they would have to pay for cartage. Supposing you put As. 8, would that be a fair price?

Sir Jogendra —Yes, at present prices. When I say present prices I mean the present value of the rupee

Mr. Milne —As. 4.6 is for raising the cane, As. 2.3 is probably the cost of boiling. That is As. 7. Against that you have to maintain a pair of

bullocks and men during a slack time instead of keeping them employed. If you look at this record of work of the tenants in question you will see that the months of December—January are the lean months for their work. This is a factor which comes in if the tenant sells his cane. He must be allowed something for this. He will not be prepared to sell his sugarcane at the cost at which he can grow it. He has to keep his bullocks and there is nothing very much for him to do. He employs himself for a fair wage by growing sugarcane. That is the point. I think the price of cane would have to be 7 annas on the field and then cartage on top of that.

Dr. Matthai—8 annas at the factory would be considered fair?

Sri Jogendra—Yes.

Mr. Milne—Here are records of the accounts for the tenants year by year for the different crops, wheat, cotton and sugarcane. Are they of any use?

Dr. Matthai—It is only to find out whether there is any alternative crop which can take the place of sugarcane.

Mr. Milne—It will be seen that there was a net profit of Rs. 80 per acre on wheat in 1927-28. This is the average for 7 tenants. (Shown.)

Dr. Matthai—What was the price then?

Mr. Milne—Grain was Rs. 4-9.

Cotton												
Year	Yield			Price per m und			Total receipts			Net profit + or loss — per acre		
	Mds	Srs	Ch	Rs	A	P	Rs	A	P	Rs	A	P
1927-28	9	85	6	15	9	6	154	2	3	+107	12	6
1928-29	5	9	0	11	8	8	75	18	6	+35	11	1
1929-30	10	13	6	10	13	6	112	0	9	+70	14	4

Wheat												
Year	Yield			Price per maund			Total receipts			Net profit + or loss — per acre		
	Mds	Srs	Ch	Rs	A	P	Rs	A	P	Rs	A	P
1927-28—												
Grain	13	32	2	4	9	0	62	15	8	+30	8	7
Bhusa	21	31	7	0	12	0	18	9	5			
1928-29—												
Grain	22	22	1	4	12	0	107	2	0	+76	11	0
Bhusa	40	10	10	0	9	0	22	10	0			
1929-30—												
Grain	21	59	1	2	14	0	63	2	11	+26	6	1
Bhusa	36	10	8	0	6	0	13	9	7			

Mr. Rahimtoola—You have given us the latest figures?

Mr. Milne—What we have done here is to give the average of the three years' costings. The total acreage of wheat was about 220 acres. Our figures are as nearly accurate as we can give. I may draw your attention to the fact that in none of these accounts is rent included.

President—Why have they not put in their rent? What is the reason for that?

Mr. Milne—These tenants are on the "Batai" system, i.e., they share the crop with the landlord in lieu of rent.

Dr Matthai—The rent comes out of the profits so to speak

Mr Milne—Yes For your purpose you will have to add rent Then there is sugarcane These accounts show that there was a loss of Rs 11 per acre in 1927-28 The tenants got 41 maunds of gur and sold it at Rs 48 per maund

Gram

Year	Yield			Price per maund			Total receipts			Net profit + or loss — per acre		
	Mds	Srs	Ch	Rs	A	P	Rs	A	P	Rs	A	P
1927-28	9	7	14	4	4	0	39	1	5	+8	13	11
1928-29	14	1	4	4	4	6	60	1	1	+29	8	9
1929-30	15	27	10½	8	2	0	49	0	7	+14	4	1

Sugarcane

Year	Yield			Price per maund			Total receipts			Net profit + or loss — per acre		
	Mds	Srs	Ch	Rs	A	P	Rs	A	P	Rs	A	P
1927-28—												
Gur	41	25	0	4	8	0	187	5	0	—11	1	5
1928-29—												
Gur	66	5	5	5	7	6	361	10	8	+98	1	5
Juice	—	—	—	—	—	—	2	13	10			
1929-30—												
Gur	50	28	10	5	4	5	267	15	7	+42	12	11
Juice	—	—	—	—	—	—	0	9	11			

President—There was a definite loss that year?

Mr Milne—Yes In 1928-29 the tenants got 66 maunds 5 seers and there was a profit of Rs 98 per acre Here is another statement for 1929-30 Which shows a net profit of Rs 12-12 The tenants got 50 maunds of gur and sold at Rs 54 per maund Then this is the average (showed) for the three years, which you have already seen We have similar statements for the Toria crop

Toria

Year	Yield			Price per maund			Total receipts			Net profit + or loss — per acre		
	Mds	Srs	Ch	Rs	A	P	Rs	A	P	Rs	A	P
1927-28	5	28	0	6	9	0	37	6	6	+8	15	4
1928-29	5	4	8	7	8	6	36	14	6	+7	8	1
1929-30	8	35	11	6	0	0	53	5	8	+24	2	8

President—What is Toria?

Mr Milne—One of the oil seeds belonging to the cabbage family

Dr Matthai—Is that the most important of your oil seeds?

Mr Milne—Yes

Mr Rahimtoola—Under oil seeds you have a much bigger area than under sugarcane?

Mr Milne—Yes

President—How do they transport gur in the Punjab? In tins?

Sir Jogendra — They make it into balls—quite dry

President — Then they send it in gunny bags?

Sir Jogendra — Yes

President — They don't need tins or anything of that sort?

Sir Jogendra — No. It is quite solid

President — The Indian Sugar Committee decided that cane was less important than wheat and other crops in the Punjab. That position has entirely changed?

Sir Jogendra — Yes

President — They also made a recommendation about a sugar factory somewhere commanded by the Sutlej Valley project

Sir Jogendra — That was not taken up either

President — Was that considered?

Sir Jogendra — It was not considered either. Government did not allot any land for sugarcane. The trouble was about the security of water. The project is not giving as much water as we thought it would

President — Sugarcane requires a lot of water?

Sir Jogendra — Yes

President — Then you will have to make special arrangements?

Sir Jogendra — Yes

President — Do you think that your sugar factories would be able to hold their own against competition from the factories in the United Provinces?

Sir Jogendra — I think so

Dr. Matthai — On this question of working season. I notice that Mr. Noel Dren is rather keen that the working season should have a minimum period of 120 days. I understand that the question of frost introduces an element of difficulty. Are you thinking of any particular arrangements for ensuring supplies of cane?

Sir Jogendra — No. It would have to be like this. We shall have to cultivate early, middling and late canes. Regarding frost, I am having all the canes analysed in all the localities and we have got the analysis of the last three years

President — Some of your canes are recent developments under improved varieties and these have resulted in the discovery of some varieties which are not particularly susceptible to frost

Sir Jogendra — Yes. But you cannot say that a heavy frost will not have any effect. In Louisiana they have been able to make sugar successfully although the climate is much colder

Dr. Matthai — When do you expect the normal season to begin as regards the factory at Sonapat?

Sir Jogendra — Shall I tell you as we are or as we hope to be?

Dr. Matthai — As you hope to be

Sir Jogendra — If you want that, we shall begin with the cane which would ripen at the end of November

Dr. Matthai — What kind of cane is that?

Sir Jogendra — Katha

Dr. Matthai — Is that an indigenous cane?

Sir Jogendra — Yes

President — Will that give a good return?

Sir Jogendra — Yes

Dr. Matthai — What kind of yield do you get out of that?

Sir Jogendra — 27 to 30 maunds of gur per acre

Dr. Matthai — What about the Coimbatore canes?

Sir Jogendra — Co. 205 and 223 are grown in the canal area

Dr Matthai—Do they ripen in the beginning of December?

Sr Jogendra—Yes Co 213 is a late cane

Mr Milne—I have here a statement which shows the dates of ripening for these various canes

Period of ripeness and the length of the crushing seasons

Variety	Gurdaspur	Sialkot	Central Districts Jullundur and Hoshiarpur		Southern Punjab Bohtak and Karnal
			A	B	
Katha		15 13 to 15 9	1-12 to 31 3	15 11 to 31 1	
Dhauru	25 11 to 0 1	1 13 to 1 2			
Lalra					25 11 to 15 3
Surotha					25 11 to 31 3
Co 205	18 2 to 18 4	15 13 to 15 4	1 2 to 15 4	1 3 to 1 4	10 1 to 31-3
Co 213			15 2 to 31 3	1 2 to 15-4	10 1 to 31-3
Co 223	15 3 to 20 1	17 11 to 12 12	1 2 to 7 4	7 2 to 11-1	1 1 to 31 3
Co 255	20 2 to 20 4	2 12 to 11-4	25 2 to 1 4	20 2 to 20 4	
Co 290	17 8 to 25 1	12 12 to 11-1	7 1 to 22 1	17 8 to 25 1	

A—Dhak and Manjha tracts

B—Dona, Surwal and Bat lands

Dr Matthai—The idea is you could go on till about the middle of March?

Sr Jogendra—Yes What would happen in the case of certain canes is this If the frost is heavy, glucose will be formed at a certain period but our experience is that if we get better weather afterwards, then the effect is almost removed

Dr Matthai—Unless the frost is very very heavy?

Sr Jogendra—Yes, and continuous

Dr Matthai—By continuous you mean what period?

Sr Jogendra—We get frost for three days at a time

President—Mr Nool Datta said in his report that all his figures were dependent on the crop being in the ground till about April 15th

Mr Milne—He did

Sr Jogendra—They have crop in the United Provinces till the 15th April Here we have no experience In the United Provinces before the factories came in, the harvest was finished by the end of February It is only now that the factories want the cane to stand and people allow it to stand We have so far had no experience but we might do the same thing

President—They would have no objection They would not be able to grow anything else

Mr Milne—It is a matter of which crop follows Wheat usually follows, which means that it is sown in November, so that there is plenty of time

Sr Jogendra—The result has been that where the land has been heavily manured under cane, they get a good wheat crop

President—Do they put down any khariff crop?

Mr Milne —They occasionally do so but the most common crop after sugarcane is wheat

President —So that there is no real difficulty in getting the cane?

Sir Jogendra —No

President —For that the factories will have to arrange?

Sir Jogendra —They will have to pay a higher price for the cane that stands till April

President —They pay up to 10 annas

Mr Milne —Mr Noel Deerr says "No central factory could hope to operate successfully The establishment of central factories should not be considered" That is what you are referring to

Dr Matthai —If you are going to get your 120 days the earliest kind of cane that you can have is at the end of November You must have four months, viz, December, January, February and March in order to get 120 days

Mr Milne —Yes

Dr Matthai —I find a reference in the Sugar Committee's report to windrowing in the chapter on the North West Frontier Does that apply here?

Sir Jogendra —We have not made any experiments

Dr Matthai —Is there any kind of possibility of windrowing?

Mr Milne —I don't see why it could not be done if we wanted to

Sir Jogendra —When I say we have not done, I mean it has not been necessary

Dr Matthai —You never had the problem of having a factory

Mr Milne —We can windrow if there is an advantage but areas of cane are small for cultivator and there is a slack season at crushing time so they get as much cane crushed as they can with their bullocks and don't bother to windrow much

Dr Matthai —Supposing it was a question of a white sugar factory and supposing the cane supply failed in the middle of the season owing to heavy frost, the only way of preserving cane for the purpose of grinding would be some kind of artificial arrangement of that sort?

Mr Milne —Our frost occurs in December—January or early February.

Dr Matthai —It is being done only for the purpose of seeds?

Mr Milne —That is all December—January is a slack season for the zamindar and he could windrow then for a sugar factory But if cane work goes on in March, he has no time to deal with it because he is busy with other crops Here is a statement showing the analysis of canes, weight in tons per acre, sucrose content, glucose content, etc

Table showing the quality of cane in terms of Sucrose, etc

Name of Variety	Weight in tons per acre				Weight per ton of stripped cane	
	Stripped cane	Sucrose	Glucose	Total solids	Sucrose	Glucose
<i>Southern Punjab</i>						
Lalri	15 70	1 38	019	1 70	088	0012
Suretha	24 00	2 13	037	2 64	090	0016
Co 205	22 89	2 09	042	2 50	092	0019
Co 213	24 32	2 56	019	2 89	104	0008
Co 223	23 68	2 35	040	2 68	100	0017

Table showing the quality of cane in terms of Sucrose, etc —contd

Name of Variety	Weight in tons per acre				Weight per ton of stripped cane	
	Stripped cane	Sucrose	Glucose	Total solids	Sucrose	Glucose
<i>Gurdaspur and Sialkot Districts</i>						
Co 223, Sialkot	20.4	1.07	.012	1.93	.082	.006
Co 223, Gurdaspur	18.4	1.23	.197	1.50	.076	.0083
Co 205, Sialkot	18.2	1.25	.110	1.60	.079	.007
Co 205, Gurdaspur	17.4	1.53	.199	1.84	.089	.0080
Co 285, Sialkot	15.2	1.49	.045	1.68	.098	.003
Co 285, Gurdaspur	16.6	1.66	.077	1.80	.089	.0047
Co 290, Sialkot	14.2	1.59	.042	1.74	.112	.009
Co 290, Gurdaspur	19.1	1.62	.095	1.89	.085	.0050
Dhauhu, Sialkot	15.8	1.29	.047	1.55	.082	.003
Dhauhu, Gurdaspur	7.4	0.56	.015	0.64	.076	.002
Katha, Sialkot	11.2	1.02	.022	1.90	.092	.003
<i>Jullundur Doaba</i>						
Katha	14.4	1.24	0.029	1.48	0.085	0.0022
Co 205	23.8	2.27	0.067	2.74	0.095	0.0029
Co 213	25.9	2.06	0.046	3.03	0.099	0.0018
Co 228	22.1	2.06	0.045	2.36	0.093	0.0020
Co 285	28.8	2.56	0.009	3.12	0.091	0.0003
Co 290	28.8	2.11	0.047	2.62	0.091	0.0020

President —Is there any future for the khandsari system of manufacturing sugar?

Sir Jogendra —No. It is wasteful.

President —Has that not been followed at all in the Punjab?

Sir Jogendra —We have done something in our farm at Gurdaspur. I don't think that there is any future for it.

President —Have you been making any experiment on Khan Bahadur Hadi's Bel system? He says that he gets 8 per cent of sugar.

Sir Jogendra —He says so.

President —It is not a direction in which you intend to proceed in the Punjab?

Sir Jogendra —No.

Dr. Matthai —Nor would you consider refining *gur*?

Sir Jogendra —Not at all. That is most wasteful.

President —Mr. Burt mentioned to me that in any case it would probably be very difficult to introduce the khandsari system of manufacture because it required a great deal of experience.

Sir Jogendra —That is true. I am not for it even if the experience could be acquired.

President —On principle you object to that?

Sir Jogendra —Yes.

Dr. Matthai —Supposing you had areas where communications were bad, don't you think that there would be a case for trying the white sugar factory on a small scale?

Sir Jogendra —I don't deny that.

Dr. Matthai —I notice from one of your pamphlets that about 30 or 40 years ago there was a good deal more khandsari sugar than now.

Sir Jogendra —Yes

President —Your road communications—I have not travelled in the Punjab—are they good? You claim that your province has a large number of roads?

Sir Jogendra —I think we are second to none in the matter of roads

President —There is no necessity for introducing the khandari system in the Punjab?

Sir Jogendra —No

Mr. Milne —We are very well off in the matter of communications

President —In Rohilkhand, I think there is plenty of cane and it is impossible to start a white sugar factory there because they cannot get their cane in or their sugar out

Dr. Matthai —Is there any possibility of exporting *gur* from the Punjab to the other provinces?

Sir Jogendra —No

Dr. Matthai —Why?

Sir Jogendra —In the first place I think Bombay absorbs most of the *gur*—from the United Provinces and this side. The railway freight is against us. The United Provinces can do it cheaper than we can.

Dr. Matthai —Is there any local preference about flavour?

Sir Jogendra —The *gur* made in Jullunder is very good and people like it and so it is expensive

Dr. Matthai —Apart from the question of price if you take high class eating *gur* from the Deccan would that be acceptable in the Punjab?

Sir Jogendra —It is better than our own *gur*

Dr. Matthai —What do you mean by better? It is not the question of sucrose content?

Sir Jogendra —It is the flavour

President —Do you export any *gur* to Karachi and Sind?

Sir Jogendra —I don't think we do

Dr. Matthai —Going back to this question of subsidised factories what is the kind of capitalisation you are thinking of?

Sir Jogendra —When I said I could spend one crore of rupees I had in my mind the building of, say, 100 factories in the course of five years, taking the basis of the Sonapat factory costing about Rs. 10 lakhs for a 400 tons factory

Dr. Matthai —That would be on an output of 4,000 tons of white sugar a year?

Sir Jogendra —Yes

Dr. Matthai —The estimate we got from other sources works out to somewhere about Rs. 10 capitalisation per maund of white sugar

Sir Jogendra —That may be correct

Dr. Matthai —Yours is apparently the latest?

Sir Jogendra —We placed our orders two years ago. Prices may have gone down since then

Dr. Matthai —That would include irrigation?

Sir Jogendra —That does not include irrigation, that is simply the factory. So far as I remember it includes refinery and buildings

Dr. Matthai —Mr. Roberts, could you give us a detailed statement of the cost of your plant and the erection of it at Sonapat?

Mr. Roberts —I can send it down

Dr. Matthai —As far as Sonapat is concerned you can also give the complete block account?

Mr. Roberts —Yes

Dr. Matthai—What precisely is the extent of the control that Government has over the Sompit factory?

Sri Jogendra—Our capital is one fifth and we have two Government directors on the Board.

Dr. Matthai—Have they any special powers?

Sri Jogendra—None at all. We interfere as little as possible. If we can help them we try to help them.

Dr. Matthai—I understand no arrangement has been made so far for the supply of cane for the season?

Sri Jogendra—That is true.

Dr. Matthai—You have got to start within a month?

Sri Jogendra—The factory was not quite ready a month ago. I am going to have a talk with our co-operative people to-morrow.

Dr. Matthai—Have you got your staff ready?

Sri Jogendra—Yes, we have got our co-operative staff in the district.

Dr. Matthai—I mean the staff for the factory?

Mr. Roberts—They are being engaged.

Dr. Matthai—How many people have you in charge of the factory, I mean the technical staff?

Sri Jogendra—I cannot tell you.

Dr. Matthai—Have you got a man definitely appointed at all?

Mr. Roberts—I will give you the figures to-morrow definitely.

Dr. Matthai—Your chemist has yet to be appointed?

Mr. Roberts—I have got a number of applications and I am engaging one of them and the Government chemist is going to work in our laboratory this season. We are going to place our laboratory at his disposal.

Dr. Matthai—Have you any kind of idea purely on the agricultural side of the development scheme you are thinking of, what kind of grant for the Imperial Council of Agricultural Research would be adequate for a reasonable scheme of sugarcane research?

Sri Jogendra—In fact two schemes have already been approved by them at Calcutta.

Dr. Matthai—Would that be sufficient, assuming that we are going to protect the sugar industry on the basis of 10 or 12 years?

Sri Jogendra—I will let Mr. Milne answer that question.

Mr. Milne—Help the agriculturists by way of manure, water supply, better implement for cultivation. We would require a fairly large sum and I think those are the things on which we would concentrate for the present because research work is being done in the United Provinces more or less.

Dr. Matthai—If it were a question of pushing through the development of the industry at a fairly rapid rate during the next 10 or 15 years is it possible for you to suggest any kind of figure?

Sri Jogendra—The position is this. New canes are being produced at Coimbatore, they are being tested at Karnal and other sugarcane farms and once the cane is tested, we have a system of giving seeds for one eighth of an acre for distribution, so that adequate supply of new canes could always be available. Firstly we shall have to make full arrangements for the propagation of tested seeds and their distribution. Secondly to arrange the supply of adequate manure and thirdly an adequate supply of water for irrigation. I think arrangements will have to be made in the neighbourhood of factories to keep a stock of suitable manure available and advance it to the people. The second thing would be adequate supply of water and for that we will have to spend money. On the scientific side, that is to say, on the question of breeding and selection I don't think we need do much. We have got Karnal Farm.

Dr. Matthai—How far is Karnal from Sonapat?

Sir Jogendra—40 miles

Dr. Matthai—Do you consider it desirable that the factories themselves should have some responsibility for the supply of good seed?

Sir Jogendra—That was recommended in the Sugru Committee's report and it would be a good thing if instead of Government doing it the factories undertook it

Dr. Matthai—That is to say instead of Government financing this they give subsidies to the factories?

Sir Jogendra—I think that would be more economic and business like

President—Have you considered any scheme of subsidy for distribution of seeds to the factories?

Sir Jogendra—The question has not arisen yet

Dr. Matthai—Supposing, for example, you contemplated an arrangement of that kind in connection with the Sonapat factory crushing 600,000 maunds of cane in a year, what do you think is likely to be the scale of expenditure to be incurred by the factory to distribute its own seeds? Is it possible to make a kind of rough estimate?

Mr. Milne—With crops of 400 maunds of cane per acre the factory requires 1,500 acres of cane per annum and this would require 75 acres of seed cane to plant it. This again if sold at annas 4 to 5 per maund would be valued at about 8,000 to 10,000 rupees a year

Dr. Matthai—What is the price at which you sell the seeds? Is that also 4½ annas a maund? You say in your replies that the cost of seeds has gone up recently and that is one of the reasons why the expenses of cultivation have also gone up

Sir Jogendra—I think the factories could have at least 50 to 100 acres under their own cultivation

Dr. Matthai—In answer to question 13 you say "On the other hand higher rates demand for improved seeds (especially sugarcane) have increased costs of cultivation slightly" I could not very well reconcile that with the statement made earlier in your memorandum that Government farms gave seeds free

Sir Jogendra—In some places they do

Mr. Milne—It may be right in this way that one farmer sells seed cane to another farmer and demands a higher price. In fact they do

Dr. Matthai—These statements that you give in answer to question 10 are really costs of making gur as well as of cultivating sugarcane, are they?

Mr. Milne—The statement which you are referring to includes the cost of making gur. As a matter of fact the figures I have given you for the Risalawala farm are very much more accurate

Dr. Matthai—You don't think it would be safe to build anything on these figures—a figure like Rs 283 8 at Sialkot? Is it possible to sell gur at that price?

Mr. Milne—The cost of lifting water from a well is very high, so that the costs of production of crops increase tremendously

President—I think probably one explanation of that was that it was a kind of refined gur

Mr. Milne—We have got costs of about Rs 226 per acre including rent at Risalawala as the cost of raising the crop and making gur

President—That was for 50 maunds of gur?

Mr. Milne—Yes, that was Rs 226 and this is Rs 283.

Dr. Matthai—Is that Sialkot gur supposed to be of special quality?

Mr. Milne—It may be made from what we call chewing cane, there is more of the thick varieties of cane grown there

Dr Matthai—What is this figure of Rs 3 4 which you mention as the price of a maund of *gur* in answer to question 3? You say "The Combatore canes have yielded as much as 100 maunds of *gur* to the acre at Lyallpur which at an average price of Rs 3-4 per maund means a gross return of Rs 325 " Is the price of Rs 3-4 the price in Lyallpur?

Sir Jogendra—Rs 3 4 is very low There must be some mistake about it

Mr Milne—Here is the Season and Crop Reports (shown)

	Per maund of raw sugar
	Rs A
1928-29	6 5
1927-28	5 6
1913 14	4 2

President—In answer to question 15 you have given the prices of raw sugar (*gur*) as Rs 6-5 in 1928 29

Mr Milne—That is taken from the season and crop reports These are the harvest prices

Dr Matthai—About 18 months ago Meerut *gur* was selling at somewhere about Rs 3-4 We were told so by the Imperial Council

Mr Milne—Meerut *gur* is good *gur*

Dr Matthai—Rs 4-8 was a very low price

Mr Milne—It is

Dr Matthai—I was wondering whether there was some reaction on the *gur* price in the Punjab

Sir Jogendra—I cannot speak with any authority about prices

Mr Milne—You can rely on the prices from the season and crop report being correct

Dr Matthai—If you look at Question No 26 last column, Lyallpur Circle where you give a figure of Rs 6 3 9, may we take that as the current price in Lyallpur?

Mr Milne—Yes

Dr Matthai—Your Rs 3-4 must be a mistake?

Mr Milne—I have not quoted a figure of Rs 3-4

Dr Matthai—I notice that Rs 3-4 in Mr Noel Deerr's note is the fair cost of *gur*

Mr Milne—That is where the figure is quoted

President—These figures given in answer to question 26 do not seem to tally

Mr Milne—Those are revenue department figures for particular places They are the averages in each circle

President—I notice here they give one quotation for Lyallpur Circle In 1928-29 the price was Rs 5-8 and in 1929 30 the price was Rs 6-8-9 That is a rise of about 12 annas Is that the same for other places? Has there been a rise last year?

Mr Milne—Nobody else has given the figures for 1929-30

Dr Matthai—Of all these prices of *gur* that you have given us which is the price which is likely to affect the price of sugarcane in the Sonapat area?

Mr Milne—Jullundui Circle

Dr Matthai—Jullundui Circle is the nearest?

Mr Milne—Yes and Ludhiana District is the nearest mentioned in the statement

Dr. Matthai—Would you be able to give us the current prices of *gur* in these prices?

Mr. Milne—I shall get them for you.

Dr. Matthai—Can you bring the figures in answer to Question No. 20 up to date?

Mr. Milne—Yes.

Dr. Matthai—I notice from these statements in curing tobacco you use *gur*.

Mr. Milne—Not for curing but for mixing with tobacco.

Dr. Matthai—Yes, mixing.

Mr. Milne—They do more in the United Provinces.

Dr. Matthai—They use more molasses but you seem to be using *gur*?

Mr. Milne—Yes, as there are no molasses available.

Dr. Matthai—Is that used on any large scale?

Mr. Milne—No, tobacco is not manufactured on a large scale.

Dr. Matthai—What about *gur* as cattle food?

Sir Jogendra—Yes, it is used as food for cattle.

Dr. Matthai—Is it practised on a large scale?

Sir Jogendra—Yes.

Dr. Matthai—Even there I suppose molasses might be cheaper and an equally effective substitute?

Mr. Milne—Yes.

Dr. Matthai—That might be an argument for instituting a sugar industry.

Mr. Milne—Yes.

Dr. Matthai—These factories that you have mentioned in answer to question 35, are all these working?

Sir Jogendra—No. 1 is working.

Dr. Matthai—Are they refineries?

Sir Jogendra—Amritsar Sugar Mills is a refinery. The other one is crushing some sugarcane.

Dr. Matthai—When you say small factories, on what kind of scale do they work on?

Sir Jogendra—Amritsar sugar mill buys *gur* from the United Provinces and refines it. I think they have one vacuum pan. I could not exactly tell you. The output is very small.

Dr. Matthai—These factories (Nos. 4, 5, 6) manufacture direct from cane?

Sir Jogendra—That is like Khandsari business. No. 5 is a Khandsari concern. He has got a power crushing mill and centrifugals. It is the usual Bel system. The same is No. 6. No. 4 is a small mill worked by power. No. 3 is a sugar factory started long ago, but they are not making any sugar. It is a distillery. None of them except Sonapat is a modern sugar factory.

Mr. Milne—I have here the price of raw sugar for the fortnight ending 15th October, 1930, Rs. 6 6-0.

Dr. Matthai—It is the average for the whole province?

Mr. Milne—The Director of Land Records gets prices from a number of places. This is the average wholesale price of raw sugar for the fortnight ending 15th October, 1930.

Dr. Matthai—I notice from Mr. Noel Deem's estimate of cost that at the present price of sugar the whole profit would be wiped out.

Sir Jogendra—Yes.

Dr. Matthai—He estimated a profit at a price of Rs. 12.

Sir Jogendra —Yes That is why we are seeking your protection Save us from the disaster which awaits us

Dr Matthai —In spite of your free trade convictions?

Sir Jogendra —Yes

Mr Rahimtoola —In answer to Question No 33 you say "We are only just starting with a Government subsidy a really up to date sugar factory in the Punjab to manufacture sugar from cane" Will you tell us what has happened to change the Government view that the Government have now gone in for shares instead of the original intention which I take it is to subsidise

Sir Jogendra —I have not quite followed the question

Mr Rahimtoola —The original intention I take it from this answer was to give a subsidy to Sonapat factory

Sir Jogendra —That may be an inaccurate expression, but the idea was simply to take shares in the factory in the interests of the cane growers

Mr Rahimtoola —In answer to question No 33, you say "No inferior Java sugar is being imported into this province"

Sir Jogendra —Some people are getting molasses and gum for making sugar

Mr Rahimtoola —I take it in answer to question No 10 you have revised the opinion that Java white sugar is replacing gum in urban areas and there is a growing use of tea in towns which is creating a demand for sugar In answer to question 33 you say "No inferior Java sugar is being imported into this province"

Mr Milne —That is correct Your question is "To what extent if any has inferior Java sugar comparable in quality, appearance, and flavour to local *gur/jaggery* been imported into your province"

Sir Jogendra —Question No 40 is quite clear Even the people in towns who used to use *gur* now are using white sugar

Dr Matthai —Do you think that the price of sugar affects the price of *gur*?

Sir Jogendra —Yes to a certain extent

Mr Rahimtoola —In answer to question No 28 (d) you say "Imported sugar has its indirect effect upon the price of *gur*" If the price of sugar goes down considerably certain people belonging to the *gur* using class take to using sugar though ordinarily people who consume *gur* are a class by themselves who have no craving for sugar"

Sir Jogendra —Craving is a psychological factor

Mr Rahimtoola —The idea of putting up 100 factories is I think gradually to get rid of *gur*?

Sir Jogendra —Yes, because we waste so much sugar

Mr Rahimtoola —You will have then to educate this class of people who will not look at sugar according to this report?

Sir Jogendra —Yes I cannot give you a definite answer In Java itself until a few years ago *gur* was made, and then production was the same per acre Then came the sugar factory and now sugar has replaced *gur* It is a natural tendency that if you get a refined article you drop all crude product

Mr Rahimtoola —Here it is said that there is a class who will not look at sugar

Sir Jogendra —That is what one sees at present It is just stating the present position

Mr Rahimtoola —In answer to question No 17 you have given us the different rates for the different years Do I take it that 1928-29 fairly represents the average, because you reached as much as 523,000?

Sir Jogendra —It does not represent the average, but possibilities of expansion

Mr Rahimtoola—You consider that in spite of the drawbacks you have mentioned in answer to question No 18, 400,000 is the average

Sir Jogendra—Yes That is the average of 10 years

Mr Rahimtoola—You mentioned in the beginning that you would like the distribution to be made by a sort of Sugar Board of the money that will be realised by the protection if any is recommended by the Tariff Board

Sir Jogendra—Yes

Mr Rahimtoola—You are aware that there is a standing Sugar Committee in existence and that is more or less in line with the Sugar Board recommended by the Sugar Committee of 1920 Do you think that committee will be able to meet that point?

Sir Jogendra—It may have to be strengthened with more business and financial experience

Mr Rahimtoola—This Committee is appointed by the Imperial Council of Agricultural Research

Sir Jogendra—Yes and they will see in what direction it needs strengthening

Mr Rahimtoola—You mentioned also about Co operative Societies?

Sir Jogendra—Yes

Mr Rahimtoola—Is there any memorandum or any regulations in existence or how do they work?

Sir Jogendra—Co operative societies are of various kinds—credit societies, better living societies, better farming societies, better breeding societies, etc

Mr Rahimtoola—They have a regular system of working, constitution and so on?

Sir Jogendra—They have rules and regulations If you want, I can send them to you

Mr Rahimtoola—Yes, it would be useful if you could Your definite opinion is I take it that, as regards protection, unless there is a subsidy to the factories, protection by itself will not bring in capital?

Sir Jogendra—It will bring it in only gradually

Mr Rahimtoola—What do you mean? Your idea is that there should be protection for ten years?

Sir Jogendra—Yes

Mr Rahimtoola—That is the period you have suggested?

Sir Jogendra—Yes

Mr Rahimtoola—Supposing there is no subsidy then I take it that protection will not be effective or that you will not be able, after the expiry of the protective period, to face world competition?

Sir Jogendra—Quite so

Mr Rahimtoola—Then you regard subsidy as one of the essential things for the success for the Sugar Industry?

Sir Jogendra—Absolutely

Mr Rahimtoola—And you leave to the Imperial Council the question of proportionate distribution to the various provinces?

Sir Jogendra—Except that it should be laid down that it should be on the basis of sugarcane grown in each province

Mr Rahimtoola—I would like to know whether Government in taking the shares or giving the encouragement to the Sonapat Factory contemplate to have a certain number of Indian apprentices?

Sir Jogendra—No We have not so far thought of it In a new business just to be started, we must get men who have experience and so far as I am concerned I would get them from anywhere

Mr Rahimtoola—That is different from getting apprentices

Sir Jogendra —Yes, they would certainly be trained. We recommended a Sugar School in the report of the Sugar Committee.

Mr. Rahimtoola —You would see that the Sonapat factory does employ a certain number of Indian apprentices?

Sir Jogendra —Yes. But in the beginning we will have to start with experts.

Mr. Rahimtoola —Apprentices become experts later on. The object is to give an opportunity to Indians who have the necessary qualifications.

Sir Jogendra —I agree.

Mr. Rahimtoola —You think that when you have a large number of factories you will be able to consume all the sugar that may be produced or you will have to do the exporting?

Sir Jogendra —In the first place we have to produce enough to meet the present demand which is in the neighbourhood of 1 million tons.

Mr. Rahimtoola —You are losing, according to Mr. Noel Deer, Rs 10½ crores.

Sir Jogendra —Yes. The first thing is to capture the home market which needs 1 million tons of sugar. When we have got it up, we might think of other markets.

Mr. Rahimtoola —You are aware that the present price of Java sugar in Calcutta is approximately Rs 8 5 per maund.

Sir Jogendra —Yes.

Mr. Rahimtoola —You think that unless protection is given early, it will lose its benefit or its value?

Sir Jogendra —The sooner it comes, the better. We are in a frightful position regarding the prices of other agricultural produce. All the local Governments—not only local Governments but also the people—are looking out for some cash crop. We would welcome some kind of interim report if you could send in one, so that your recommendations might be taken up in the next year's budget.

President —You mean interim decision by the Government and not interim report by the Tariff Board?

Sir Jogendra —Your report will lead to the Government of India's decision.

Mr. Rahimtoola —You mean that unless the report is before the Government of India, they will not be able to look into the question?

Sir Jogendra —Yes. The sooner it is done the better. The agricultural position is very difficult. The value of the rupee in the hands of a banker is three times what it used to be in commodities, and commodities in the hands of producers are about one-third in value.

Mr. Rahimtoola —I take it that the amount of protection that you want is that the imported sugar should sell at Rs 12 here.

Sir Jogendra —Yes, I was thinking that if you could put on Rs 2 a maund in addition to existing duty it will meet our purpose.

President —Over and above the present duty?

Sir Jogendra —Yes.

Mr. Rahimtoola —At present the duty is as high as Rs 4-8.

Sir Jogendra —Yes. It is a question of raising the level so that we may nurse our sugar industry. You have to raise the barrier to prevent the flow of sugar from outside and as other countries raise their barriers we have to raise our own. The process will perhaps never end, till world returns to Free Trade.

DIRECTOR OF AGRICULTURE, UNITED PROVINCES

**Oral Evidence of Mr G CLARKE, recorded at Shahjahanpur, on
Monday, the 17th November, 1930.**

President—What we really want to ask you is this. We want to get some idea of the price of cane which would be fair to the cultivator and at the same time within the reach of the factories. Starting with 4½ annas which you give as the cost of producing improved varieties of cane.

Mr Clarke—The cost of producing improved canes is 4½ annas. The cost of producing indigenous canes is more owing to smaller yields without a proportionate reduction in the cost of operations. I put it at about 6 annas. I should say that 8 annas at the factory is a fair price for the improved varieties of canes with price of sugar and gur at Rs 12 and Rs 5 respectively. Considering what the cultivator can earn by working it up into gur himself, I do not think he will sell his cane for less.

President—That of course does not allow anything for insurance against frost or disease or anything of that sort?

Mr Clarke—No.

President—We might add one anna to the cost of production for that?

Mr Clarke—It is an extremely difficult question to answer. You might add something on a sliding scale proportionate to the reduction of the condition figure of the crop below the average of a number of years. This is a matter on which you might consult experts in insurance. My own view is that you cannot insure against the normal risks of season, etc., in India, but I may be wrong.

President—What about the outlay of the cultivator on his crop? Some sort of allowance in the shape of interest should be required. Probably half an anna would not be unreasonable.

Mr Clarke—The cash outlay is not relatively large compared to the value of the crop, rent, canal rates, and depreciation on implements and bullocks and manures. The greatest outlay is labour. If he gets 8 annas for cane which costs 1½ annas to grow, I think he will be satisfied. It is not in the interests of the cultivator to work the price of cane up above a figure which the factories can not pay.

President—I am trying to find out what would be the cost of cane delivered at the factory on the whole. A price of 8 annas per maund delivered at the factory would not be unreasonable?

Mr Clarke—No. That is practically what the small scale factories are paying in Rohilkhand. What interests the cultivator is the labour income he can get from a maund of cane by making gur. This is the comparison he makes with factory prices.

Dr Matthai—It is not a question of profit on capital invested in industries?

Mr Clarke—No.

Dr Matthai—It is a question of what he gets after deducting all his expenses?

Mr Clarke—His actual cash expenses.

Dr Matthai—Once you deduct that the rest is his income?

Mr Clarke—Yes. He gets a wage for his time on the sugarcane fields according to this figure. If prices are high he earns more, if prices are low he earns less.

Dr Matthai—The value of the crop to him is what he gets in the shape of his labour income?

Mr Clarke—Yes.

President—What sort of price is the present price of *gur*? You have given us some prices

Mr. Clarke—These prices were supplied by the Land Records Department. The price of *gur* is now about 1* rupees per maund

President—Is that eating *gur*?

Mr. Clarke—Yes. First quality *gur*

President—What would you allow for the actual out of pocket expenses of a cultivator in making *gur*?

Mr. Clarke—I have given you that as near as I can calculate it for 171. The cost of making *gur* would be about 6/5 of that

President—Excluding his own labour and that of his bullocks, hire of pans hire of mills etc?

Mr. Clarke—That is all included in the figures I have given

President—We can work that out from the statement

Mr. Clarke—Yes

President—The cost of hiring pans and mill, I am not quite sure what the hiring cost is. I suppose you can do it on the assumption that it is purchased?

Mr. Clarke—In Rohilkhand I think it is about Rs 20 per mill for the whole season as long as he wants to use it

President—What is the actual crushing season?

Mr. Clarke—114 days roughly

President—Rs 20 for that?

Mr. Clarke—Yes

President—What would be the hire of pans?

Mr. Clarke—Rs 5

President—Rs 25 in all

Mr. Clarke—Yes

President—It is much cheaper than Bombay

Mr. Clarke—Yes

Deputy Director Rohilkhand Circle—In Meerut, and Muzaffargarh they charge Rs 50 per mill per season but their mill is larger and more efficient and crushes more cane per hour

President—The price of Meerut *gur* would be roughly the same?

Mr. Clarke—Yes

President—That is high class eating *gur*?

Mr. Clarke—Yes

President—We were discussing the question with Mr. Burt. The point that occurred to me was this. If the expected increase in outturn of cane per acre is obtained in two or three years we shall have a tremendous increase in cane and a glut in *gur*?

Mr. Clarke—The market for *gur* is very large and can absorb much more than is now produced

President—When we were in Bombay we found that because of your exports of *gur* to Bombay their price had considerably fallen

Mr. Clarke—It must be so. The Bombay prices were high compared with our prices. We have 5,14,000 acres under improved canes which give double the yield

Dr. Matthai—What is the figure for this year?

Mr. Clarke—5,14,000 acres. It has gone up in the last 3 years as follows 1,12,000, 2,81,000, 5,14,000 acres

* Since this was written the price has dropped to Rs 3

President—If you were to increase your outturn of *gur* from the U P to 500,000 tons and if you started exporting it to Bombay, you might wipe out Bombay?

Mr. Clarke—It is costing I understand between 10-12 annas to grow a maund of cane in Bombay. They cannot compete with places which can grow cane of fine quality giving 10 pts *gur* per 100 cane for 4½ annas a maund.

President—There would be two results. First of all, the price would go down a good bit and secondly Bombay and some of the more expensive provinces would be wiped out.

Mr. Clarke—Yes. That is a natural consequence but I do not think the drop in the price of *gur* if there is a protective tariff on white sugar will fall to the extent that other commodities have fallen. Sugarcane will still be a high value cash crop in the United Provinces.

President—From that point of view it is desirable to have an outlet for your surplus cane.

Mr. Clarke—We think that will come naturally by the use of small power plant and the development of central factories if the industry is reasonably protected.

President—You would want an orderly development rather than a sudden development at a time?

Mr. Clarke—Yes. That is desirable. As I said I don't think the fall in prices will be of the same magnitude as the fall in the prices of other commodities if white sugar is protected. That is necessarily conjectural.

President—Mr. Hunt seems to think that it has already started.

Mr. Clarke—This year's prices don't show such a fall as in the price of other commodities. Raw cotton has for instance come down from over Rs 7 per maund to 3, wheat and barley the same, *gur* has not yet fallen in the same proportion.

Dr. Matthai—One limiting factor in the case of *gur* is the grower's capacity for making *gur*?

Mr. Clarke—Yes the bullock power available for crushing is the first thing that will operate to limit the area or rather the production. If we increase as we are doing we shall not be able to crush all the cane by bullocks and shall require a lot more small power mills to do so but I think they will come along. With regard to central factories I must confess that I do not see at the moment where the crores of rupees of capital necessary is to be found. My view is that the small power plant will come along first because the capital required per maund of cane is low and that this will be followed by the large central factory in due course. That is why I am keen on the small plant under our present conditions not because I am not whole-heartedly in favour of the big factory but because I think their development will be slower.

President—You would get a good deal of capital from the existing companies. Some of the companies are thinking of doubling their capital.

Mr. Clarke—This might provide at the outside 10 or 20 new centrals. I am visualising conditions which require 200. The shyness of capital is illustrated by the fact that many engineers in the north United Provinces want conditions which are impossible to fulfil regarding facilities for the control of land, leases and so on.

President—Even without land, Begg Sutherlands are thinking of increasing their capital.

Mr. Clarke—But I do not think they contemplate operations in the new areas. In fact I do not think anyone but the small factory owner could tackle the problem at once in some of our most concentrated cane areas on the Ganga which are many miles from railways and metalled roads.

President—You attach a good deal of importance to khandasari people?

Mr. Clarke —Yes, not because their methods are the final solution of the problem but because they are the only people who can tackle the problem of working up an increased cane crop at once

President —It looks from our figures that which a reasonable protection they might be able to carry on

Mr. Clarke —I think they could carry on very well with improved canes making sugar and gur in one process

President —Your conclusion is that at Rs 11 or 12 they could carry on?

Mr. Clarke —My investigations show that

President —Java is dumping now?

Mr. Clarke —There appears to be no doubt of it. They are landing sugar in Calcutta, I understand at Rs 3 8

President —Very nearly

Dr. Matthai —If you want the price of sugar to be Rs 12 here, what would be the price in Calcutta?

Mr. Clarke —I rather expected you to tell me that. It is a computable figure but I have not all the facts. I should say about Rs 10-8 including duty and landing charges

Dr. Matthai —Do the khandais get any kind of preference because their sugar is swadeshi?

Mr. Clarke —Slight, about 6 to 8 annas, but it may disappear at any time

President —Actually our idea is that the present duty is working out to somewhere about Rs 8 a cwt

Mr. Clarke —The present duty I understand is about Rs 4 8 per maund

President —Our idea is this. At present there is a world slump in sugar such that if we do not take steps to safeguard the Indian factories making white sugar, they would find it very difficult to cope with the situation

Mr. Clarke —That is so, or to take it on a broader basis, the production of sugar is such that some one has got to give up growing the raw material, cane or beet and we are afraid that if adequate protection is not given our cultivators will be forced out of the business. This would be an agricultural disaster to the province and that is why we are anxious for reasonable protection for all sugar products gur as well as white sugar

President —If proper steps are not taken in the first few years they will make attempts to knock out the Indian factories

Mr. Clarke —Not only Indian factories but the Indian producer of gur for I am convinced that, without reasonable protection, gur would be imported and knock out the local producer. We shall be the first to go because of our local conditions. I am anxious for protection for the sugar factories naturally but I am even more anxious for protection for the cultivator who produces gur and derives most of his ready cash by doing so

President —We contemplate a protective scheme for a period of about 15 years. For the first part of the protective period we shall want a fairly stiff duty so as to be on the safe side?

Mr. Clarke —Yes

President —Our idea is rather working in the direction that for the first seven years there would have to be an additional duty

Mr. Clarke —That is a total duty of 5 88 per maund. At what price is Java landing sugar in Calcutta?

President —Say Rs 3 8

Mr. Clarke —That will make the price in Calcutta just under Rs 9 8 and up country about Rs 11. Have we any reliable information as to what limits Java can go to in the matter of reducing the price?

President —We worked it out with Mr. Burt

Mr. Clarke—The present landing price, viz., Rs 38 means that Java is allowing about an anna or under per maund for their cane. How long can they keep it up? That is the question you have to decide.

President—At Rs 38 they sacrifice some of their depreciation which they can afford to do because they have built up a large reserve.

Mr. Clarke—They made enormous profits during the war of course, many millions of pounds so some of that is going in the price war?

President—It does not mean that they are making profit or even providing anything for depreciation.

Mr. Clarke—The thing that concerns us is will the duty you propose of 588 keep the price at the ports upto Rs 108. That seems to me a reasonable figure. Do you think it too high?

President—We have not made up our mind yet.

Mr. Matthai—We think a little below or above Rs 10 will be quite all right.

President—Even at Rs 108 there would not be any unreasonable burden?

Mr. Clarke—No. When the price of sugar was Rs 12 the consumption of improved sugar was highest. What about gur?

President—We are considering the possibility of putting on gur and all inferior grades of sugar whatever duty we intend putting on white sugar.

Mr. Clarke—That is an excellent proposal. One lakh of maunds of gur was imported into Lucknow this year. The importers thought they would get it at Rs 48 and make a profit in refining it. Actually it costs them over Rs 6 and they lost on it. This was due to the additional duty of Rs 1-8 imposed last year on gur. It shows that the importation of gur and lower grade sugars is a real danger to our industry.

President—We thought that after seven years out of whatever duty was imposed, we don't say it should be possible, but it might be possible to take off perhaps Rs 2 and we might suggest that an enquiry should be held after seven years and in that enquiry it should be decided how much of the two rupees should be taken off—not whether the duty should go below the basic duty which would be in force for 15 years but whether the additional duty of Rs 2 should be in force after the first seven years.

Mr. Clarke—That is very sound.

President—Mr. Burt was telling us that although the cost of cane should be roughly 3 annas now, in ten years or so it might be possible to reduce the cost of cane with improved varieties and improved methods of cultivation.

Mr. Clarke—Yes it is possible. Another enquiry after 7 years would indicate the trend of events.

President—With the basic duty of Rs 6 per cwt in force all the time.

Mr. Clarke—That would meet the case of the United Provinces admirably. What about the duty on gur?

President—The same duty would apply to gur.

Mr. Clarke—I am in full agreement with your proposals especially as regards gur. Believe me the attack on the gur market is a real danger. It is such an obvious outlet for surplus sugar and nothing is easier than to make a presentable gur by factory methods.

President—Supposing we omit molasses not containing 30 per cent sucrose.

Mr. Clarke—That is all right, but the percentage must be fixed.

President—If that was done it would be satisfactory?

Mr. Clarke—Yes, now I should like to sum up what the position may be expected to be in the United Provinces if your proposals are accepted. There is duty, railway freight, and handling charges at port.

President—The freight is Rs 1-8 to Cawnpore and 3 annas handling charges

Mr Clarke—Very well Java lands at Rs 38, freight and handling charges come to Rs 1-11, duty to Rs 5-14-0 so that the price in Cawnpore of Java sugar may be expected to be Rs 11-1 The price in Calcutta will be Rs 9-6 I should prefer a duty which will make the price in Calcutta at least Rs 10 for few years

Dr Matthai—You have to add 3 3½ annas for clearing

Mr Clarke—That has been done We are taking what we hope is the outside figure for cost of Java sugar namely Rs 3-8 It cannot go much lower than that

President—Yes

Mr Clarke—That will be satisfactory as far as we are concerned *Gur* will develop according to the local demand

President—There is no *gur* refining industry in India We don't want that

Mr Clarke—No

President—In the case of England there is this big difference There they have a big refining industry and they want to encourage it

Mr Clarke—I think Government will be quite satisfied with your proposals

President—Will they meet your case?

Mr Clarke—Admirably

President—What about research? We must make some recommendations on the financial side as regards your funds The funds might be allotted to the Imperial Council for research, demonstration and so on

Mr Clarke—This needs careful consideration Money from the Sugar tax should be allotted for development and given to local Governments for developing sugarcane cultivation It should be given without imposing conditions which make it difficult to accept There should be the minimum of report writing and correspondence and such things as consume the time of the workers I am of opinion that the best results will be got in the case of the United Provinces by allotting a lump sum for the general agricultural development of the three sugarcane circles, namely, Western Rohilkhand and North Eastern circles The actual details should be left to the United Provinces Government Development would naturally be mainly for sugarcane as it is the principal crop, but its development cannot be entirely dissociated from other crops The expenditure of the lump sum would be used for increased demonstration staff, facilities for seed production, demonstration plots demonstration machinery and so on I would much prefer this to a detailed scheme for sugarcane only and it would give a better result A detailed scheme simply for sugarcane will not fit in well with the existing organisation and will consequently be very difficult to administer The money available should be allotted in some relation to the area under sugarcane That is as good a criterion as is possible The principle adopted by the Governing Body of the Research Council of allotting funds only for research or work of interest to more than one province and on condition that the provinces contribute on a 50-50 basis should not operate for the following reasons (i) The money should be used to finance work of immediate practical and local value to the cultivator, demonstration on his own field to take one example and (ii) we want to take up work in new areas or expand work in old areas for which Government have no funds and could not contribute That is my view of how the money should be used for the development of sugarcane growing Long range research is of course necessary but the immediate thing is to give the cultivator practical help We possess the knowledge but not the funds for extending our work in the villages

President—You want more money for demonstration Is that it?

Mr Clarke—More money for demonstration amongst other things. My view is that the money from this tax should be allotted to the provincial Government to use as it thinks best for the development of sugar industry. Its proposals will come within the purview of the local Legislature and will be subject to its control and criticism as part of the general agricultural programme of the Minister. The Imperial Council has hitherto made no grants for general development work.

President—Is it because of the terms of their constitution?

Mr Clarke—I am not sure whether it is because of their constitution or the policy the Governing Body have adopted.

President—It seems to me that the Imperial Council would be justified in allocating money to provincial Governments.

Mr Clarke—I think myself a lump sum should be given to Provincial Governments from the sugar tax for the expansion of agricultural work in the sugarcane areas.

Dr Matthai—You mean a lump sum periodically?

Mr Clarke—Yes. Say two lakhs a year as long as the sugar tax is in force.

President—You will be up against the financial rules. The Central Government cannot allot money to the local Governments.

Mr Clarke—Some means has to be found. A clause might be included in the Protection Act or the Finance Bill. Any how it is a question for the Central Financial Experts to examine.

We want to get on with the work and I dread the discussion which would take place on minor details in the Advisory Board of the Research Council if detailed schemes are financed.

President—Your view is that your Government should be given Rs. 2 lakhs every year for the sugarcane demonstration work?

Mr Clarke—For agricultural development in the sugarcane districts.

President—If this is not possible under the present rules, the rules should be altered?

Mr Clarke—Yes.

Dr Matthai—The Imperial Council being independent, if it is provided that they should make a contribution, there is nothing in the devolution rules to prevent that?

President—Mr Clarke says that unless it is research of all India importance they do not make any contribution.

Dr Matthai—Is that in their constitution?

Mr Clarke—Either under their constitution or the policy they have adopted. The fact is they only at present finance research schemes generally confined to schemes of an all India nature. I do not say that this is wrong with the money which has been hitherto allotted to them, but I say that the money proposed to be allocated to provinces from the sugar tax should be used in a different manner, namely for practical field work which will immediately benefit the cultivator and help him to grow more and better cane not in 10 or 15 years time as the result of the successful issue of some piece of fundamental research but next year as the result of applying research work already done.

President—The development of improved cane is in my opinion an all India matter.

Mr Clarke—I don't quite understand, the organisation for the production of canes at Coimbatore is fairly complete that is undoubtedly an all India matter. It is the introduction of these canes into general agricultural practice, the demonstration of new methods of cultivation in villages and so forth that I am referring to. This is a provincial matter.

President—You are trying to get the villagers to introduce improved varieties?

Mr. Clarke—Yes. I think we can say we have got past trying, with 514,000 acres of improved canes in the villages. We want now to get them to adopt better methods of cultivation with these new canes for one thing.

President—Do you think that there would be any objection if the Coimbatore Research Institute had some centre in the United Provinces where they could continue their work?

Mr. Clarke—What is the object?

President—The object would be to try their cane.

Mr. Clarke—It is being done very thoroughly by the Provincial department.

President—Would not they want to do it themselves?

Mr. Clarke—Why should they? Would there be any advantage? The local man will have to decide finally whether a cane is suitable for a particular place in the province or not.

Dr. Matthai—The kind of advantage that they claim is this. They have sugarcane at their sugarcane breeding station. They send their seedlings to the provinces. Then, after a time from the provinces whoever is the man in charge reports to Coimbatore "your cane has failed." Now the Coimbatore man has to make sure that it has failed because of its inherent defects.

Mr. Clarke—What generally happens is that whoever is in charge reports that such and such a cane has succeeded and we should like to try more canes of this type.

Dr. Matthai—Supposing you have some provinces—as you obviously have—where there is nobody who is particularly interested in sugarcane?

President—Supposing the man in charge does not know anything of sugarcane?

Mr. Clarke—I cannot conceive of a major sugarcane province with a person in charge who does not know anything of sugarcane. If there are such cases now there will not be when the money from the sugar tax is distributed for sugarcane development.

Deputy Director of Agriculture Rohilkhand Circle—The Coimbatore people cannot grow their canes better than we are doing here or give them a more accurate and thorough trial.

Mr. Clarke—I think the fact that we have 514,000 acres under improved sugarcane, $\frac{2}{3}$ of which are Coimbatore varieties, proves the Deputy Director's contention.

President—As far as your province is concerned you think that there is no necessity?

Mr. Clarke—Not at the moment. I would prefer to see what money is available spent on propaganda. It seems to me that the proposal as you put it is in the nature of a suggestion that the Coimbatore canes do not get a fair trial or chance in the provinces. I think the facts quoted above demolish that contention. I should prefer to see Coimbatore specialise more on intensive breeding work and study that problem in all its aspects as has been done by the cane breeders in Java. It is in that way I think that they can best help the provinces.

President—Do you attach a good deal of importance to the canes being grown under expert supervision?

Mr. Clarke—It is obvious that 514,000 acres cannot be grown under expert supervision. What is wanted is a strong staff to advise the cultivator. I should like to see every factory employ an agricultural expert.

President—Supposing a strong association of producers was formed, interchange of information and so on between various factories might be of assistance?

Mr Clarke —Yes, but it would only touch at present a very small proportion of the total area in the United Provinces, a small part of Gorakhpur. Enormous areas in the United Provinces would still have to rely on the local agricultural department for development and would not be touched by the association.

President —Do you think that it would be useful to get the Imperial Council to finance any sort of Association of that sort?

Mr Clarke —I am neither very much in favour of it nor very much against it. I should like to see every factory assisted to employ expert agricultural officers. I am not particular about the procedure whether by an association or by the local Government from funds provided by the sugar tax.

President —Do you think it desirable that a factory or a zamindar should be subsidised to put down a certain area under a certain kind of cane?

Mr Clarke —Yes. We do it in the case of zamindars.

President —Is it successful?

Mr Clarke —Very successful indeed. We give grants varying from 1,500 to 4,000 and the zamindars grow say 20 acres of diseased hill cane of particular variety and sells it at a specified price to persons named by the department. Practically the whole of our seed supply has been organised in that way.

President —For the reasons you were giving just now, there might be an association of factories. If the Imperial Council were to give grants, they could give grants to the Association and the Association might then make grants.

Mr Clarke —There is just this point to be considered. The grants made by the association would result in the distribution of new sugarcane varieties to the cultivator. It is just possible that varieties which were not suitable might be distributed by factories. They might make a mistake in their selection and it might lead to disaster later on. Would it not be better to make the local department responsible that the right varieties are distributed by allowing the local Government to control the grants. If other bodies come into the province with an organisation for seed distribution uncontrolled by local authorities, I do not see how the Minister can maintain proper control of agricultural development for which he is responsible to the legislature. I mention this not with any obstructive idea but simply to make things more workable under the present conditions.

President —Another point I should like to get your opinion on is this. Do you think it desirable that if the Protection Act were to be introduced, there should be clause making it compulsory on all factories to give such information as might be desired by local Governments and the Imperial Council of Agriculture?

Mr Clarke —That is very sound. You would have to arrange that their books were opened for examination.

President —Yes, that will probably be a good thing for the sugar industry.

Mr Clarke —Yes, but would the factories accept it?

President —Why not? You are not going to publish their costs. As regards rival factories I believe the practice in America is that factories send their costs to their rivals every fortnight so that the whole industry is benefited. I don't know whether you have formed any opinion on the point about factory zones raised by the Sugar Committee?

Mr Clarke —I think it out of the question as a practical measure.

President —You don't agree with the idea?

Mr Clarke —No. It would never get through the legislature provincial or central.

President —It might be very hard on the agriculturists?

Mr Clarke —There is likely to be a tendency in that direction.

President—We have heard complaints from the Sugar Producers Association

Mr. Clarke—I have dealt with the point in my written replies

Dr. Matthai—What would be your suggestion? What measures would you suggest to prevent the overcrowding of factories in a particular area?

Mr. Clarke—Common sense

President—Leave it to the factories themselves?

Mr. Clarke—Yes

Dr. Matthai—You don't think that there would be any danger of the situation in North Bihar repeating itself in other parts of the country? The trouble is that if we protect the sugar industry, if we put the industry on a protective basis, sugar becomes a paying proposition and then the tendency for overcrowding would be greater than it is now. If that sort of thing happened the whole protective scheme would fail.

Mr. Clarke—Is the zone system applied in any country except Java?

Dr. Matthai—Formosa has something like it

Mr. Clarke—You may see Lord Olivier's remarks on the condition of the Java peasant under this system. I would not like to see Java conditions prevailing in India. The cultivator is badly enough off as it is.

President—You would ask us to leave things alone as far as that is concerned?

Mr. Clarke—Yes, I would leave it alone.

President—As regards the prices which the cultivators get for sugarcane there is no real possibility of introducing any scheme?

Mr. Clarke—I worked out a scale for the Sugar Committee but it was too difficult to work in practice.

President—It would act as a sort of guide for the general public.

Mr. Clarke—I don't think it would operate. The price of cane adjusts itself on a very definite basis. What can the cultivator get if he makes *gan* himself? That is the test applied. As regards the written replies on costs of production have you examined these in detail? I have given in the first place actuals and in later statements made certain deductions from the actual figures.

President—Your costs are worked out on the same lines as those of the Punjab?

Mr. Clarke—Yes.

Dr. Matthai—The intensive cultivation of Coimbatore canes costs slightly more per maund of cane.

Mr. Clarke—Yes. The cheapest form of production at present is production of 600–700 maunds per acre by extensive methods using green manure, but I do not know if this can continue indefinitely. The time may come when it is necessary to grow 1,000 maunds per acre to meet the country's demand for sugar.

Dr. Matthai—On the figures you give the labour income derived from sugarcane even at present prices is the highest.

Mr. Clarke—It is a fact.

President—Except chillies.

Mr. Clarke—And possibly tobacco.

President—What about the statistics on page 10?

Mr. Clarke—The prices were supplied by Land Records Department and give a fair indication of the trend of prices. The figures for area are reliable and the output is fairly correct.

President—Has the output been altered with reference to the increased area under improved varieties?

Mr Clarke —Yes

President —Rohilkhand has the biggest area under improved varieties

Mr Clarke —Slightly larger than the Meerut tract, much larger than the Gorakhpur tract

Dr Matthai —You cannot give us the prices of *gun* for Gorakhpur?

Mr Clarke —No These are not recorded officially I should like to know if you have any criticisms to make about the costs given on pages 16 and 17 of the United Provinces note

President —The costs are in accordance with the other costs we have There is nothing to ask you about them

Dr Matthai —They seem to make out that there is not likely to be any difference between bullock and power mills If you go on labour income it is better for the bullock mill

Mr Clarke —Yes

Dr Matthai —But the power mills would be of importance if the output exceeds the capacity of bullocks

Mr Clarke —It is essential to bear this point in mind If the cultivator employs a power mill he has to pay cash If he uses a bullock mill he earns that money which he cannot otherwise earn It provides him with employment He will therefore go on using bullock mills until the increased production compels him to resort to power mills to work up the crop

President —In the costs on page 19 when was the factory put down?

Mr Clarke —Three or four years back

President —Would there be any substantial reduction in the costs?

Mr Clarke —There might be a slight reduction

President —Could we put it at 15,000 instead of 16,000?

Mr Clarke —That would be safe

President —As regards your answer to question 86 do you think cane can be more cheaply produced by the cultivator than by the factory?

Mr Clarke —Undoubtedly

President —What do you think of the Hadi system?

Mr Clarke —My Deputy is in a better position to answer that question

Deputy Director, Rohilkhand Circle —Hadi method is not different in principle from the Rohilkhand bel He has made some improvements The pans are flat

Dr Matthai —His pans are also smaller?

Deputy Director, Rohilkhand Circle —Yes, but they do not last so long as the Rohilkhand pans

President —Does it give better results?

Deputy Director, Rohilkhand Circle —No, why should it? If the users of the Rohilkhand bel would keep their plant as clean as Mr Hadi does, they would get the same results

President —It is a question of practice?

Deputy Director, Rohilkhand Circle —Yes

President —He claims a recovery of 8 per cent of sugar

Deputy Director, Rohilkhand Circle —I don't believe it For more than 25 years he has been trying this bel I see no improvement I have seen hundreds of them years ago They cost Rs 500 and do not last more than a year whereas the Rohilkhand bel costs Rs 300 and will last 10 years

DIRECTOR OF AGRICULTURE, BIHAR AND ORISSA

**Oral Evidence of Mr G S HENDERSON, recorded at Pusa on
Friday, the 24th October, 1930**

President—Mr Henderson, you are the Director of Agriculture, Bihar and Orissa?

Mr Henderson—Yes

President—How long have you held the position?

Mr Henderson—A little over eleven months

President—As regards the enquiry on which we are engaged you are authorised to represent the Bihar and Orissa Government, are you not?

Mr Henderson—Yes

President—We have received a memorandum from the Government of Bihar and Orissa and we understand that the most important part of this province so far as sugarcane is concerned is North Bihar?

Mr Henderson—Yes, so far as white sugar manufacture is concerned

President—And a very large part of the area under sugarcane in North Bihar is unirrigated?

Mr Henderson—Yes, the big majority

President—What is the reason? Why is it possible to grow cane here in unirrigated lands? In almost all other parts of India cane is grown in irrigated lands and it is only in this part that it is possible to grow cane to any considerable extent in unirrigated lands. What is the reason for that?

Mr Henderson—The reason is that it has got a very special type of alluvial soil which is retentive of moisture

Dr Matthai—I suppose rainfall is slightly higher in North Bihar than in South Bihar, is it not?

Mr Henderson—Rainfall is very erratic

Dr Matthai—If you take the average for the year, does North Bihar get more rainfall than the south?—I am speaking of north east Bihar, that is to say, the area where the big plantations are

Mr Henderson—Where the white sugar factories draw their supplies from is practically all in the north of the Ganges

Dr Matthai—What do you call that particular area?

Mr Henderson—I will show you the map which will simplify matters (map shown and handed in)

President—What is the reason why white sugar is not made in the South Bihar range for example?

Mr Henderson—I take it that it is due to cane being too patchy there. Here we find compact areas and the prospect of increasing the area here is more satisfactory. It takes the place of the old indigo crop to a certain extent

President—Is cultivation more expensive in South Bihar than North Bihar?

Mr Henderson—Cane is grown as a garden crop in many places. It is grown in small areas and much more hand work is done

President—It is grown with well irrigation I suppose?

Mr Henderson—In the Shahabad area it is grown on canals. This is the oldest system of irrigation in India

Dr. Matthal—It is the Sone Canal?

Mr. Henderson—Yes

President—Is there any prospect of a considerable expansion there? What about Buxar?

Mr. Henderson—It has a factory but it is not very efficient. It is a small factory.

President—We have not really been able to follow the costs which the Local Government sent us for cultivating sugarcane. The cost of cultivating one acre of sugarcane is given in North Bihar as Rs 164. That is Combitore variety. That would be unirrigated, would it?

Mr. Henderson—Yes. I may state that these figures are very approximate. It is extraordinarily difficult to get any estimate of the actual costs of cultivation.

President—They are so approximate that in some cases they are difficult to follow. For instance in this North Bihar estimate of Rs 130 on ryot's land labour is stated as Rs 60 and rent Rs 10 but I don't find any cost of setts, or cost of manure or delivery charges to factory.

Mr. Henderson—Labour is included in the estimate.

President—What about the cost of setts?

Mr. Henderson—That is included in Rs 30 and manure too. That figure includes setts, manure and other expenses.

President—Rent in that case represents two years' rent, does it not?

Mr. Henderson—Generally a year and a half.

President—These other costs here, those for South Bihar, South East Bihar and so on, are those for irrigated lands or unirrigated?

Mr. Henderson—They are for irrigated.

President—Why is the cost of irrigated crop less than the unirrigated?

Mr. Henderson—Cost of growing irrigated cane is generally more than unirrigated but rent is very much higher in North Bihar.

Dr. Matthal—If you make allowance for rent, rent in one case being Rs 10 and in the other case Rs 10, and you add to that Rs 30, it becomes Rs 70 in one case and Rs 50 in the other which is Rs 10 below that for the irrigated area?

Mr. Henderson—The figures are absolutely approximate. When you take further evidence probably a witness will come and give you the cost of growing cane is Rs 50 and again it may go as high as Rs 200 per acre. I am a member of the Sugar Committee, a special committee of the Imperial Council of Agricultural Research. We went into this question very fully and decided that the data were unreliable, so this committee approved of various experts being appointed in the cane districts to study for at least two years and get the local data. It has been impossible to get figures of any reliable value.

Dr. Matthal—Is it possible to get actual figures for at least one particular typical holding of ryot's land?

Mr. Henderson—That might be entirely different from another holding a very short distance away.

Dr. Matthal—If you took the most important cane area in South Bihar, say, two typical holdings there, would you be able to get some figure which would be more reliable than a general estimate of this kind?

Mr. Henderson—Yes if you could get a man to devote himself entirely to this work and let him work this out on the spot. But even then the figures obtained for cane grown in the Shahibzad area for instance would bear no relation whatever to the figure for an area under cane in, say, Champaran or Darbhanga.

President—You say the general output of cane over the Province is 800 maunds per acre. Is that for North Bihar?

Mr Henderson—Yes

President—Take your cost of cultivating one acre of sugarcane in a Government Farm, Rs 164 would you put down the outturn of that land at 300 maunds per acre?

Mr Henderson—More than that it would be well over 300 maunds

President—The Planters' Association who have sent us a memorandum on this enquiry say that the figure which we might take is the outturn on unirrigated land is 300 maunds. But surely on their own land they get a much better return than that don't they?

Mr Henderson—Probably some get a better return but a good deal is fairly bad

President—They have motor ploughs and so on?

Mr Henderson—They have oil tractors in many cases

President—Shouldn't they get a better return on the average?

Mr Henderson—They will get in some cases quite a good return but owing probably to bad land or bad season or attack of "boilers" the average would come down

President—If so there is no possibility of reducing the costs. At present they are using the Combratois variety and they say they don't think there is much possibility of increasing the outturn, if this is the position, 300 maunds per acre costing Rs 130 without apparently delivery to factory, that would mean something like 7 or 8 annas as the cost of production!

Mr Henderson—That is high undoubtedly

President—Mr Clarke of the United Provinces worked out figures of Government farms and checked them by figures of cultivators' own land and has come to the conclusion that the cost of production is about 4½ annas

Mr Henderson—In the United Provinces they get a bigger yield, it is irrigated cane

Dr Matthan—What kind of yield would your typical cost figure here represent?

Mr Henderson—500 maunds. In some cases it is very much more, but you may get on to bad land which would put down the yield. Then you must remember that the costings in Government farms are not particularly reliable when it comes to a practical proposition, because they may have small plots and a big staff on this work may be mixed up with other experimental work and so on

Dr Matthan—Supposing we took for North Bihar this figure of Rs 130 as approximate for ryot's land?

Mr Henderson—That is an approximate which the Deputy Director estimated. I think myself it is rather high

Dr Matthan—We quite recognize that there are no reliable figures to be had but could we take Rs 130 as the best approximate figure that we could get?

Mr Henderson—I would put it at a lower figure than that, say Rs 100

Dr Matthan—The output of cane being 300 maunds?

Mr Henderson—Yes

Dr Matthan—That gives you about 5 annas 4 pies per maund of cane, that you think would be somewhere about right?

Mr Henderson—Somewhere about 5 annas would be right I think

Dr Matthan—If we take 4½ annas a maund as the cost of cane do you think as an approximation that is an acceptable figure?

Mr Henderson—It is certainly a figure which no one can dispute

President—4½ annas plus carriage to the factory?

Mr Henderson—In some cases the factory arranges for the carriage. The Samastipur people are paying the cost of carriage.

Dr Matthai—Do you mean byivot's land in North Bihar land held by these big zamindars?

Mr Henderson—The arrangement is somewhat like this in this part of India. The sugar factory has made in the first instance an agreement with the planter for supply of a certain amount of cane that he grows himself but he also has an area given to him in which he acts as ticeadar and collects cane and on that he gets one half anna commission.

Dr Matthai—What I am trying to get at is this. Taking this Rs. 130 as an approximate figure, does that represent the cost of cultivating cane on his own holding?

Mr Henderson—Yes on his own.

Dr Matthai—The difficulty that we are up against is in coming to some kind of conclusion as to what is a fair price for sugar manufacture in this part of India? We have got to get a figure which would at any rate be approximately correct as regards cost of producing sugarcane and since this is the best approximate figure that you have been able to put forward, would you consider Rs. 130 as a fairly reliable figure?

Mr Henderson—I should put it down at about Rs. 100.

Dr Matthai—About 5 annas a maund?

Mr Henderson—Yes and I think I would put *dehati* grown cane figure as somewhat less. If you go into cultivation costs you meet a tremendous lot of problems for example a man may be growing cane far too often and thus losing the fertility of that land. Then again supposing a man was growing ratoon cane he might be seriously draining the fertility of his land.

Dr Matthai—I understand in North Bihar the question of ratooning does not arise.

Mr Henderson—There is a certain amount, I have seen a fair amount of it but the Agricultural Department is discouraging it.

Dr Matthai—This yield of 300 maunds is on Coimbatore varieties?

Mr Henderson—Yes.

President—It would be considerably less on *hemja*?

Mr Henderson—Yes.

Dr Matthai—If you take the big holdings in North Bihar, approximately what proportion is Coimbatore variety?

Mr Henderson—It is varying year by year. I think in a year or two very little *hemja* will be found.

Dr Matthai—You give a figure of 80,000 acres at present as under Coimbatore cane?

Mr Henderson—Yes, but that is purely a conjecture. I have no means of verifying that figure.

Dr Matthai—How is it arrived at?

Mr Henderson—It has been arrived at by reports of our staff and from what we see while going on tour.

President—That is about 25 per cent of the total area?

Mr Henderson—Yes. I think next year that will be considerably exceeded. It is spreading rapidly and I think in a few years probably you will find nothing but Coimbatore.

President—300 maunds per acre is a very low yield for the Coimbatore variety, is it not?

Mr Henderson—Undoubtedly, but a lot of cultivation in North Bihar is by people outside the factories and is very primitive.

Dr Matthai—Knowing nothing about local conditions, the way I am inclined to look at the problem is this. Here is an area which is cultivated

by large planters, they are able to effect improvements which the small ryot cannot, they understand the use of economic cultivation and they are using improved varieties. But in spite of that they get an average yield of 300 munds per acre which is very low.

Mr. Henderson—There are various things which tend to bring down the average. Much of the cane is very good and well grown but a lot of it is very bad. Then again, when you get a bad season or a lot of rainfall that brings down the average.

Dr. Matthai—Have the Bihar planters got any cost figures?

Mr. Henderson—They have probably given you some figures already. To get costings for any crop is a very complicated business. It has got to be thoroughly done. It has got to be done by a specially trained man.

Dr. Matthai—It would be worth while for these big planters to do their business on a system of correct accounting.

Mr. Henderson—Yes. Many of the big planters own very little land. In the old indigo days some factories have only got the land in which the factory was built and they drew their indigo under some old agreement from the areas surrounding their factory which were recognised as their areas, but the land didn't belong to them.

President—What is the position now?

Mr. Henderson—Some of the factories own very little land.

President—They simply buy the cane?

Mr. Henderson—Yes, on commission.

Dr. Matthai—I am not speaking at the moment of the factories, but I am speaking of the planters. What is the average size of a holding held by a planter which he himself cultivates?

Mr. Henderson—In some cases it is small—300 or 400 acres. I don't know the average figure.

President—When you spoke of a factory just now, you meant the indigo factory?

Mr. Henderson—Yes.

President—That is to say the people who own the old indigo factories are now buying sugarcane from outside and selling it on commission to the sugar factories. Is that the point?

Mr. Henderson—That is right.

President—Therefore these Bihar planters who supply the sugar factories with cane do not necessarily grow it themselves, is that correct?

Mr. Henderson—That is correct.

President—So we are not expected to find any very large plantation of sugarcane here belonging to individual planters?

Mr. Henderson—With one or two exceptions.

Dr. Matthai—What is the size of these exceptional holdings?

Mr. Henderson—I believe that the Daultpur factory which you are going to see has got a big area under sugarcane directly cultivated under their supervision. Dholi factory near Pusa has 300 to 400 acres of cane.

President—What about the planters themselves? Are there any planters who hold big areas?

Mr. Henderson—They hold areas of land in which they have both the occupancy rights as well as being maliks. In many cases they have got temporary leases from the maliks.

President—Are there any old indigo planters actually cultivating sugarcane themselves in considerable areas?

Mr. Henderson—Yes. There is one near Muzaffarpur, Bhikanpur. It has a fairly big area.

President—What is the size?

Mr. Henderson—2,000 to 3,000 highrs of cane

President—Does he go in for up-to-date methods?

Mr. Henderson—He has got both steam tackle and tractors

President—Then he should be able to get a good deal more than 300 maunds

Mr. Henderson—His evidence is before you. I know he sent in full particulars

President—Your Government says that the cost of cultivation of sugarcane can be reduced by improvements in general technique. What sort of improvement is indicated there?

Mr. Henderson—Did they say sugar or sugarcane?

President—They say "There has been no material change except in the cost of labour which has gone up in the last ten years. It is possible to reduce the cost of cultivation to some extent by improvements in general technique."

Mr. Henderson—The idea is that practically all the different processes can be improved, better implements, better cattle and in the case where irrigation is involved better means of lifting water.

President—As regards North Bihar would you consider this cost of cultivation of Rs. 100 is susceptible of any considerable reduction?

Mr. Henderson—No. I don't think you can reduce that very much except by increasing the output.

President—You were just saying that 300 maunds represent the output of Coimbatore cane per acre for an ordinary cultivator. If you are already using Coimbatore cane, in the absence of any new variety of cane such as P. O. J. in Java, it doesn't seem likely that the output will increase very much.

Mr. Henderson—It will be difficult to get output increased as conditions of rainfall and so forth are erratic. It is not only the amount of rainfall, but the distribution which is nearly as important as the total amount.

President—In considering over the next 15 years the probable cost of producing white sugar we should not be justified in taking a price for the raw material which is lower than this figure of Rs. 100 for the cost of cultivation and 300 maunds output.

Mr. Henderson—I am afraid not, the main reason being that the system of tenure is such that it is impossible to get large areas for cultivation of sugarcane.

President—How about the irrigated tracts in South Bihar? Take Buxar.

Mr. Henderson—They are not so dependent on rainfall. That is a very great point. They probably are able to grow a better variety. The cane here is good under non-irrigated conditions, but I hope we will be able to get a better variety where the conditions are more stable with irrigation.

Dr. Matthai—At present are you able to get a better yield for Coimbatore canes in South Bihar than in the North?

Mr. Henderson—In the Shahabad area where the cultivation is good and the canals are running well, the yield is very much better.

Dr. Matthai—Would it run up to 300 maunds?

Mr. Henderson—Yes.

Dr. Matthai—On an average?

Mr. Henderson—Not on an average.

President—What would be the average?

Mr. Henderson—Up to 300 maunds anyhow.

President—What are they getting now?

Mr. Henderson—I have seen crops of 1,000 maunds an acre with C. O. canes.

President—What is the cane usually used there? Is it Hemjar?

Mr. Henderson—That cane is very rapidly being superseded. The output will probably be a couple of hundred maunds an acre less.

Dr. Matthai—Taking the acre to which the existing large factories have access, I suppose as far as the immediate future is concerned, it doesn't seem likely that the cost will go down below As 5 a maund for cane.

Mr. Henderson—I don't think so.

Dr. Matthai—Is it possible for you to hazard an estimate of the sort of price at which factories in this area could depend on getting a continuous supply of cane? That is to say As 5 will cover the cost of the grower, but you have got to pay him a price that will induce him to part with his cane in favour of the white sugar factories rather than say *gur*. What is the sort of price paying which a factory could be absolutely certain of getting a continuous supply in North Bihar?

Mr. Henderson—At present they are getting canes by paying a price of As 5½ a maund but there is a great deal of grumbling going on.

President—We have seen figures higher than As 5½.

Mr. Henderson—That is I think on the Saran side where there is more competition.

President—What are those factories?

Mr. Henderson—Among others, Maibowrah, Saran District and New Saran Sugar Factory, Saran, Chapra District.

President—What about Champaran?

Mr. Henderson—They are not paying more than As 5½.

President—Just at the present moment?

Mr. Henderson—Yes.

President—What were they paying last year?

Mr. Henderson—I think then figures went down.

Dr. Matthai—What about Samastipur?

Mr. Henderson—About As 5½.

President—Your local Government says something about prices of 1928-29—As 5½ in some places and As 7½ in other places.

Mr. Henderson—That higher price applies to Saran District.

President—At present what are they paying in the Saran District?

Mr. Henderson—At present they are paying 7 annas or 8 annas.

President—This is what your Government says in their letter to the Government of India in 1929: "In the Muzaffarpur, Darbhanga and Champaran the factories fixed the price of cane during the season at As 5½ a maund delivered at the factories or at railway stations." As a matter of fact we find Champaran paying about As 7 in that area. In Saran District where there is more competition the average price paid is As 7 per maund. You say in Saran up to now As 7 is paid and in other parts as low as As 5½.

Mr. Henderson—I don't know the exact figure at present. I think it runs to about that as far as I know.

President—That is what your Government says. The actual figures we have got are considerably more.

Mr. Henderson—A few years ago they were getting As 8.

Dr. Matthai—Was it last year?

Henderson—They were not giving As 8 last year.

President—At Champaran they were paying more.

Mr. Henderson—It must have been under special conditions.

President—The average worked out at between As 7 and As 8.

Dr. Matthai—What is the price of *gur* here?

Mr Henderson—Some gur has been sold from a Government farm as low as Rs 3 8 a maund quite recently

President—How much of the crop is made into gur?

Mr Henderson—Very little in the factory zones

President—I find your Government says in the replies that about half the crop is utilised for gur and half is for white sugar

Mr Henderson—It is for the whole province and not for North Bihar only

Dr Matthai—They mention Tirhut Division

Mr Henderson—[Map shown]

Dr Matthai—That is practically the whole of North Bihar

Mr Henderson—Yes

Dr Matthai—They further say "On the other hand, the price of white sugar intimately affects the ryot in North Bihar where in the factory zone it is estimated that in a large portion of the Tirhut Division approximately equal quantities of cane are now purchased by the factories and converted into gur by the ryot" You would not agree with that?

Mr Henderson—No

President—You would say that practically all the cane is used for sugar

Mr Henderson—In these two zones practically all

President—You mean in the factory zones?

Mr Henderson—Yes

Dr Matthai—I was looking at it this way. You have given the price of gur in Muzaffarpur in 1929 at somewhere about Rs 7 a maund. If gur is selling at Rs 7 a maund, the price of cane corresponding to that—assuming 10 per cent of gur to cane—would be As 11. If the factory has got to purchase its cane in competition with gur, and if gur sells at Rs 7 a maund, it is quite impossible that he can get his cane for white sugar at as low a figure as As 6

Mr Henderson—The competition between white sugar and gur is very limited. I can tell you from my experience of making gur. One year I sold the first lot at Rs 5 a maund. I got rid of about 25 per cent and for the balance I could not get any market. I sent it all over the place. Then the rains came along and that gur became semiliquid and I had to accept a small price

Dr Matthai—Why could you not sell it?

Mr Henderson—It is an extremely local market

Dr Matthai—In this place Muzaffarpur, is there no local demand?

Mr Henderson—There is a local demand. When the local demand was satisfied, I could not find any market for the surplus

President—I want to know why the price of gur suddenly rose in 1929

Mr Henderson—It is probably guess work

Dr Matthai—Are your gur prices collected by the police?

Mr Henderson—Practically

Dr Matthai—I should have thought that gur yield was collected by policemen but that gur prices were collected by the Sub-Divisional Officer

Mr Henderson—He probably goes and makes enquiries in the bazar

President—Your Government apparently does not consider that there is any direct connection between the price of white sugar and the price of gur?

Mr Henderson—No, only indirectly

President—That is to say if the price of white sugar is high, the demand for cane in this particular area (North Bihar) would be fairly strong and people would be prepared to pay more for their cane. To that extent it might have an effect on the price of gur

Mr Henderson—Very indirectly. When the local demand has been supplied, it is very difficult to get rid of the surplus. For instance in Orissa where the cost of transport is fairly high, *gur* gets a fairly high price but once you have supplied the local demand you cannot sell any more.

Dr Matthai—Can you tell us which is the biggest local market for *gur*?

Mr Henderson—I understand that *gur* comes into Bihar and goes out of Bihar. The big market for us is Cawnpore.

Dr Matthai—The bulk of your production goes to Cawnpore?

Mr Henderson—From Shahabad side it goes to Cawnpore in the first instance and is redistributed from there. But Cawnpore is our chief market.

Dr Matthai—In that case, I suppose that if we take the price of *gur* that rules in the Cawnpore market and make some allowance for the freight from Bihar to Cawnpore we shall get the best approximation for the actual price realised by the *gur* manufacturer.

Mr Henderson—In that way you can get the price for the surplus *gur*, but it does not affect the village price.

Dr Matthai—If you are taking the local market, which is the best centre?

Mr Henderson—It is purely local. It is almost parochial.

Dr Matthai—*Gur* is a thing which can be transported over 100 miles?

Mr Henderson—Oh, yes you can, but to get the top price you have to sell it within a very small radius. After that you would probably have to sell it to some *Sait* who is in the *gur* trade and he would send it to Cawnpore.

Dr Matthai—If you take this part of Bihar and Orissa, would it be right to say that Muzaffarpur is the biggest local market for *gur*?

Mr Henderson—I should think so, or possibly Sitamarī which is a big one too. Samastipur is also another big market.

Dr Matthai—We have not got the actual prices for these markets. Of the prices that we have here I should, I suppose, be right in suggesting that the Muzaffarpur prices are more typical than any other?

Mr Henderson—Muzaffarpur is the biggest centre.

Dr Matthai—There we have this figure of Rs 7.

President—What is the price of *gur* at Muzaffarpur now?

Mr Henderson—When I left this place it was about Rs 5, that was about 10 months ago.

Dr Matthai—I would say that Rs 7 strikes me as rather high. This *gur* is rather inferior as compared with the Deccan *gur*?

Mr Henderson—There is no comparison between the two. The Deccan man would not like this *gur*.

Dr Matthai—Is Meerut *gur* a high class *gur*?

Mr Henderson—It is a good *gur*.

Dr Matthai—We have got a price of Rs 7 for Deccan *gur*.

Mr Henderson—That is the Neera Valley *gur*. That is the best in India in my opinion.

Dr Matthai—If that is Rs 7, then it looks to me that a price of Rs 7 for the *gur* here is on the high side?

Mr Henderson—Too high.

President—Anyhow as far as North Bihar is concerned you consider that the competition of *gur* resulting from people making *gur* has very little effect on the price of sugarcane paid by the factories?

Mr Henderson—I think so. There may be one exception in the case of Lohat (Darbhanga) because I believe there is some *gur* made there and sent across to Nepal, but I don't think that affects the general situation.

President—Taking the average general level of price for *gur* at Rs 5 which at my rate is approximately correct for the years 1925, 1926, 1927 and 1928 on the average, that would mean roughly 5 annas a maund of cane.

Mr. Henderson—Yes. There is one thing. If a man grows a fairly big area of cane, unless he is very wealthy, he will not have sufficient bullocks of his own to make *gur*. He cannot afford to wait till the time he manufactures his *gur*. There is only a limited amount of capital at his disposal.

President—It is only the small growers who can turn their stuff into *gur*.

Mr. Henderson—Yes. In some cases he only grows just sufficient quantity knowing what his equipment is, but if he had a chance of a market in the shape of a white sugar factory, he would grow far more.

President—Your Government says that the only impedimental factor to the spread of sugarcane is the financial one. Does that mean that sugarcane would be grown on a very much larger scale if the price paid for it is more or does that mean that the cultivator is so poor that he cannot grow more?

Mr. Henderson—I think that the area would increase very considerably if we had more sugar factories.

President—Provided they pay a reasonable price?

Mr. Henderson—Yes, otherwise they would close down. You have to go into the question of working a white sugar factory. I think that that is the best inducement for the area to be increased.

President—If a white sugar factory were to pay anything like 7 annas, that would be sufficient to induce people to grow cane?

Mr. Henderson—Yes.

President—Would that give them a fair margin?

Mr. Henderson—Yes, a good margin.

Dr. Matthai—Would you go so far as to say that that would be on the high side?

Mr. Henderson—You mean the rate of 7 annas?

Dr. Matthai—Yes.

Mr. Henderson—It is a good price, but I don't think that it can be considered high.

Dr. Matthai—Since the cost of sugarcane is the biggest element in the cost of white sugar, an increase of one anna per maund in the cost of sugarcane will make a large difference in the cost of sugar?

Mr. Henderson—Yes.

Dr. Matthai—So that if 7 annas is on the high side, there is some ground for working it down to a figure which would be more reasonable. Would 6 annas be sufficient to induce people to extend their sugarcane cultivation for the purpose of supplying cane to white sugar factories?

Mr. Henderson—I think it would be in many cases.

Dr. Matthai—Are there people who run *gur* mills without themselves cultivating sugarcane, that is to say, collecting sugarcane from neighbouring farms and doing simply the crushing in their mills?

Mr. Henderson—I have no knowledge of any such mills.

Dr. Matthai—There is no factory of that type?

Mr. Henderson—No. But there are people who hire out mills. That is more in South Bihar.

President—What are your views about the proposal of Mr. Wynne Sayer that factories should be licensed and a zone fixed for each factory?

Mr. Henderson—I think it is too late. It would have been possible at one time, but it is very difficult now.

President—Do you think that it is really needed?

Mr Henderson—From the position of the factories in Suai I don't see how it would be practicable.

President—On the other hand if any zone is fixed for a factory we might have the agriculturists of Suai complaining that they were not paid a reasonable rate?

Mr Henderson—Yes.

President—Do you think that there is any possibility of overcrowding of factories in other areas? Supposing we recommend protection to the sugar industry on such a scale that it is possible for a decently run factory to make some profit provided it is able to produce continually and get sufficient cane to crush would there be any prospect that a large number of factories would crowd into areas already sufficiently served by factories instead of going to outside areas?

Mr Henderson—Judging from the analogy of other crops I think that there is a distinct danger. I know at one time in Sind and in the Punjab there were stations in which one or two cotton gins were sufficient other people came and erected more and all of them had to take money out of the pool. In some cases they had 5 or 6 cotton gins near the railway station, but only one was working.

President—What was the final effect of that?

Mr Henderson—The stronger man will live and the weaker man will have to go to the wall.

President—As far as your cotton gins in the Punjab are concerned, I imagine that in the end the cultivator got his cotton ginned with reasonable promptitude?

Mr Henderson—It worked satisfactorily.

Dr Matthai—There is one difference between cotton and sugarcane. You can get your cotton transported over a long distance whereas in the case of cane it can go only to places within a particular radius, otherwise deterioration takes place.

Mr Henderson—The seed cotton is difficult to transport—I mean the *kapa*. It is dangerous too.

Dr Matthai—Roughly within what distance would you transport?

Mr Henderson—50 miles.

President—Why is it dangerous?

Mr Henderson—It will catch fire.

President—Is it due to spontaneous combustion?

Mr Henderson—Yes, due to friction.

Dr Matthai—If there is this danger of overcrowding under a system of protection it raises problems which have to be faced in some way.

Mr Henderson—The only thing is in the case of a sugar mill the capital involved is very large. So in practical politics I don't think it is likely to be very serious. Of course hardships might occur in some cases undoubtedly.

President—Would not the position be like this? Any new comer before starting would examine the possibility of getting his supplies of sugarcane. On the other hand if it was a small comer, if the man was erecting some small mill it would not seriously affect the position. Probably the existing mill would be able to carry on.

Mr Henderson—The small man may think 'the big man has plenty, let me butt in'.

President—In which case, he might knock off a big slice from the big man.

Mr Henderson—He might. The position would right itself in the end.

Dr. Matthai—A small man who tries to butt in in that way will have to offer a higher price for cane. Obviously in the case of a small factory, the overhead charges are high and in addition he has to pay more for his cane.

Mr. Henderson—Then he is up against other factors. He is working himself and not through managing agents. He has no selling agency.

President—I do not know how far you would agree but my impression is that this proposal as regards overcrowding has been brought forward mainly with the Saran district in view. The problem has arisen only in the Saran district and not to any considerable extent elsewhere. Is that correct?

Mr. Henderson—That is quite correct.

President—This general proposition which has been brought forward as being applicable to the whole of India is based on the experience of only one district.

Mr. Henderson—The idea is that what has happened in this particular district might also happen in the future in others.

President—Yes. Is there anything special about the Saran district which has induced factories to crowd in there?

Mr. Henderson—It is a good cane growing district, it is close to Cawnpore and labour is cheap there.

Dr. Matthai—As a matter of fact the position is, as far as big white sugar factories are concerned, the bulk of them get their supplies from the north of Bihar.

Mr. Henderson—Yes.

President—Where are the biggest factories situated?

Mr. Henderson—Lohat is the biggest factory in India. That is in Darbhanga. Then there is another factory at Baira in Champaran. Then come Sumastipur and Rym.

President—What about these factories in Saran district?

Mr. Henderson—They are of moderate size.

President—Are they smaller?

Mr. Henderson—They are about the size of Rym.

President—Another suggestion has been put forward and that is that there should be a flat rate for cane of 8 annas a maund. Have you any views on that subject?

Mr. Henderson—I don't see how that can be worked. There would be very great practical difficulty.

President—In enforcing the payment of any specified price?

Mr. Henderson—It seems to be a very difficult thing to do.

President—You don't think the appointment of any special officer with residuary powers to settle what prices should be paid by the factories is feasible?

Mr. Henderson—No. It seems to me that the practical difficulties are overwhelming. The producer of jute or cotton or any other specialized crop, for instance in that case would want a fixed rate for their crop.

President—It would involve very considerable interference with the individual right of trade and it might not be altogether popular with the cultivators either?

Mr. Henderson—If he gets a good price he may be quite pleased to get it.

President—It presupposes a price which all factories can afford but a considerable number of factories may not be able to afford to pay it and the cultivator would be worse off than he would otherwise be.

Mr. Henderson—It might mean the closing down of a lot of factories.

President—All that responsibility for the general economic position in the tract has to devolve, as far as I can see under a scheme of this sort on a

Government officer which would be in extremely difficult position for any Government to assume, don't you agree?

Mr Henderson —I agree certainly

President —I don't think your Government has actually given us any definite proposals for protection. Have you got any definite ideas on the subject of assistance presuming that the industry satisfies the conditions of the Fiscal Commission which are conditions applicable to the whole of India and not to a particular province? Presuming these conditions are satisfied, what is your idea regarding the method and extent of protection required by the industry?

Mr Henderson —It seems to me that the proposal of the Indian Sugar Producers' Association has a good deal to commend it

Dr Matthai —It practically comes to a stabilized price of Rs 10 per maund?

Mr Henderson —Yes

President —They don't state in their letter the means by which prices could be stabilized at a particular figure

Mr Henderson —What they meant was a sliding scale of duty to be put on at the port of entry based on invoice prices

President —That is to say, the Collector of Customs, if the invoice price was Rs 7 should put a duty of Rs 3, if it was Rs 7 8 he should put a duty of Rs 2 8 and so on. Apart from any other difficulties very serious difficulties arise with regard to the invoice price. The Collector of Customs is concerned in scrutinising the invoice price with ascertaining that it is not too low because the *ad valorem* duties have to be considered. In this case the Customs would be doing something quite unusual if they were to attempt to ascertain that the prices were not too high. Supposing I was an exporter of sugar from Java. I consign my sugar at the c.i.f. price of Rs 10 and then when I come to balance the accounts I give the other man a rebate of Rs 3

Mr Henderson —I don't know anything about the Customs but it struck me that whenever the Customs officers have any suspicion they can take steps

President —You would have to have some sort of judicial proceedings, it would be difficult to act on suspicion

Mr Henderson —Not the first time, but if firms are in the habit of invoicing sugar above the current rates

President —Current rates are what Java people dare to make them. It is quite common to sell at one price in England and another in India.

Mr Henderson —I don't know what the practical difficulties attached to it are

President —You may take it that there are very great practical difficulties

Mr Henderson —If it is possible to find some way by which a sliding scale of duty can be fixed on a price of Rs 10, I think, the factories alone would not get the whole benefit, the growers of sugarcane would also get a share of it

President —How would you set about ensuring that the grower gets a share of the benefit?

Mr Henderson — earmark a certain amount of the proceeds for research work, for cane distribution, for distribution of manure, propaganda work and so forth

President —That is to say, the producer of cane would get his share of the benefit indirectly?

Mr Henderson —Yes

President —Supposing there was a case in which it was proved that the majority of factories were paying something below what was considered a fair price to the cultivator, do you think that may be got over to some extent by giving powers to Government to impose some kind of cess upon the manufacturers which would be utilized in a case like this?

Mr. Henderson — I think it would be fairly difficult. Suppose there is a small and inefficient factory south of the river, say in Buxar, whose efficiency is low compared to the factory in Sunstipuri, it would be rather difficult to give to the grower any direct benefit in that case.

President — I don't mean direct benefit. It was suggested to us that if protection was introduced the result would be that the grower would get the same price he is getting at present and the factories would be able to make a larger profit.

Mr. Henderson — As soon as a factory begins to make larger profits I think other new factories would start off and the position would right itself.

President — That would be one solution. Another view possibly is that most of the established factories at any rate and the more far-sighted of the managing agents would pay a fair price to the cultivator so as to ensure the supply of cane. But apart from that would it not be some remedy if factories were compelled to send returns to the Imperial Council of Agricultural Research, then supposing the Council were satisfied that most of the factories were paying too little, that might be set right to a certain extent by Government reserving the power to impose a cess and utilizing that for the benefit of the cultivator.

Mr. Henderson — I think that would be difficult. One thing I would say and that is that there should be some provision by which white sugar factories could be encouraged to be opened in promising districts. Existing managing agents probably might shy of a new district, but it might be very much to the benefit of that district to have factories established, and some part of the extra protection could be earmarked as a sinking fund to help any scheme which is considered beneficial by the Local Government.

Dr. Matthai — I suppose a provision of that kind would have to be largely in the hands of the Central body?

Mr. Henderson — I suppose it would because there would be competition between different provinces.

Dr. Matthai — Would your object be attained if we suggested that out of the proceeds of the protective duty a sufficient sum should be allotted to the Imperial Council of Agricultural Research for investigating the possibility of opening up new areas?

Mr. Henderson — The general idea is that work which purely affects the province should be done by the province. I am rather against letting the central body to do it.

Dr. Matthai — That is true in a sense. Taking the problem in relation particularly to sugar you have got sugarcane grown in Bombay, it is grown in parts of the Madras Presidency and you have got the great sugarcane belt here. Obviously if there was some provision by which the Bombay Government, for example, could encourage the development of the sugar industry they might probably try and open up areas in that most expensive area, the Deccan, from the point of view of the country as a whole if areas were opened up in places like the United Provinces or in Bihar where things could be done more economically it might be better. When you get questions of that kind a central body which is concerned with the problem of the whole country would be in a better position to consider it.

Mr. Henderson — That central body has got no machinery so far.

Dr. Matthai — Could you not possibly arrange for sufficient co-ordination between the local scientific officers and the Imperial Council? After all the Imperial Council cannot function without the assistance of local authorities.

Mr. Henderson — I would not recommend any money being spent on new areas unless there was immediate possibility of an economic factory being established and unless the area had cane there already and showed very good promise of the area under cane being extended in the near future. The point arises in this way. In this province we have got a very good area, about a lakh of acres of cane.

Dr. Matthal—I suppose the way that area would be tackled, supposing protection was granted, would be by the Bihar and Orissa Agricultural Department making a proposal to the Imperial Council of Agricultural Research. Then the Imperial Council would send their staff, and your staff and their staff would put their heads together and investigate the problem. If the Local Government were given independent resources you might get a good deal of overlapping and a somewhat wasteful organization.

Mr. Henderson—It was proposed sometime ago that the Department of Industries should finance a pioneer factory in this area but it came to nothing because no money was forthcoming. The proposal was a sound one now the conditions are even better because in place of indigenous varieties we have got the place full of Coimbatore cane.

Dr. Matthal—Supposing ultimately we decided to recommend to the Government of India that a sum of, say, Rs. 50 lakhs or a crore should over a period of years be granted to the Imperial Council of Agricultural Research, is there any kind of condition that you would like to suggest from the point of view of Bihar and Orissa?

Mr. Henderson—I would recommend that there should be grant for encouraging the establishment of white sugar factories in suitable new areas.

Dr. Matthal—You mean particularly for sugarcane cultivation?

Mr. Henderson—Yes.

Dr. Matthal—The cultivation of sugarcane would be an important part of the purpose for which the amount would be granted. If, for example, there is a promising area here which you think might be taken up for immediate investigation, is there anything in the nature of conditions for the utilization of the grant which you would like to suggest from the point of view of Bihar and Orissa?

Mr. Henderson—I would like to get the managing agents who are experts to help in the investigation. It seems to me that it is much more economical to get the existing expert agency to help in a matter of this kind than doing the work through a purely government agency.

Dr. Matthal—Do you suggest that these managing agents who are now concerned with sugar factories are as competent to deal with the sugarcane part of the problem as the Agricultural Department? After all a considerable amount of research work is done by the Agricultural Department on sugarcane.

Mr. Henderson—They are not in a position to do much in the way of actual cane cultivation. That can be done by the Agricultural Department. Where they score is that they know the business side of white sugar production and technical factory work.

Dr. Matthal—Your point is, what they should do is to take an area where sugarcane cultivation has proved a success and investigate what the business possibilities are of developing a sugar factory there, so that that kind of research work you contemplate is really technological and commercial?

Mr. Henderson—Yes. I know of two areas where with a little encouragement white sugar factories might very successfully be established. One is Shahabad and the other is in the south of Sind on one of the new canals.

President—What increase in the output of white sugar in Bihar and Orissa Province is feasible during the next ten years?

Mr. Henderson—With the existing price?

Dr. Matthal—Supposing you got a price of Rs. 10 a maund.

President—Taking that for argument's sake, supposing the cultivator gets Rs. 7 a maund as the average price, under those conditions how far do you think that the manufacture of white sugar in Bihar and Orissa would be extended?

Mr. Henderson—We can extend the actual area under cane very considerably indeed but it is dependent on the increase in the number of factories.

President —We were told by the Begg Sutherland Group that it would be possible to put up 50 factories in the North Bihar producing about 400,000 to 500,000 tons a year

Mr Henderson —I think they need 10,000 acres per factory

Dr Matthai —That would be 100,000 tons of cane. At about 20 tons an acre that gives you 5,000 acres

Mr Henderson —They need more than that. They always reckon to do need about 8,000 to 9,000 acres cane per factory

Dr Matthai —5,000 acres is the actual area under cultivation and allowing for rotation it would come to 15,000 acres

Mr Henderson —I was told that a modern factory actually needs 7,000 or 8,000 acres of cane

Dr Matthai —If you are producing 5,000 tons of white sugar a year, you would need how many pounds of cane?

Mr Henderson —To do that we need 3½ to 4 lakhs. The total area as far as I remember, is 290,000 acres in this Province

President —How far do you think it would be possible to increase the cane? Take North Bihar

Mr Henderson —North Bihar 120,000 acres including the two factory zones

President —You will have to triple that

Mr Henderson —Yes, that is pretty big

President —But might come from Shahabad

Mr Henderson —Yes

President —That would make about 200,000 acres roughly

Mr Henderson —Yes

President —Which you can get at once leaving about 150,000 acres which would have to be an extension

Mr Henderson —Yes

President —Because I understand you to say that no considerable increase in output on present area is to be expected on account of Coimbatore canes as they are used very largely already

Mr Henderson —In the north?

President —Yes

Mr Henderson —That doesn't apply to the canal irrigated area. You can increase the production very considerably. In fact the Shahabad area is a very much sounder proposition than North Bihar

President —Is it?

Mr Henderson —Yes

President —There you can increase the production considerably?

Mr Henderson —Undoubtedly

President —You say 80,000 acres under cultivation

Mr Henderson —Last return showed 86,000 actually under cane

President —Do you think that could be doubled?

Mr Henderson —That could be easily doubled

President —There doesn't seem to be anything unreasonable in the proposal of Begg Sutherland

Dr Matthai —Begg Sutherland Company say "Provided the position and prospects of the industry were definitely secured by adequate protection against imports of sugar from abroad, the contributors believe it should be possible, within the next fifteen years, for fifty factories with the above-mentioned capacity to be established in Northern India. These factories might be depended on to produce an additional 450,000 tons of white sugar annually." They include obviously not merely these areas in Bihar, but

the whole of the sugarcane belt, that is to say, Bihar, United Provinces and the Punjab

President—Speaking for Bihar alone you consider that there is room for a considerable number of additional factories?

Mr Henderson—Yes

President—What would you put that at?

Mr Henderson—If you can establish factories, we can produce cane

President—For 20 more factories?

Mr Henderson—Yes

President—That would not exhaust the possibilities, I take it?

Mr Henderson—Not at all. At present the position is that for the whole of this province it has got about 3 lakhs of sugarcane out of a total of 30 millions cultivation

Dr Matthai—I take it then that the main point is that in making any proposal for expanding the white sugar industry in India special attention must be paid to the possibility of developing new areas rather than the intensive development of existing areas

President—For that purpose do you think that some sort of inducement should be held out to new companies? Do your thoughts run in the direction of Government giving bounties to factories?

Mr Henderson—I think we might. If we could get a really efficient organisation to start a factory in a new area, I think we can go ahead without any special bounty

President—What is the sort of inducement that you contemplate? Your idea is to get hold of the Managing Agents and say "Here is plenty of suitable land, set up a factory, there will be plenty of cane and the prospects of success are considerable, come along"

Mr Henderson—Yes

President—That is roughly your idea?

Mr Henderson—Yes

Dr Matthai—The Imperial Council is proposing to have a Technological staff in connection with sugar. I suppose the initiative in these matters might to some extent be provided by the Technological staff of the Imperial Council. It would be the business of that staff to work in co-operation with the Managing Agents of the existing factories

Mr Henderson—Yes

Dr Matthai—In that way the new areas might be developed?

Mr Henderson—In this matter the District Officials know. The Managing Agents cannot get into touch with the new areas unless the initiative comes from the Local Government. I don't think any of the Begg Sutherland people have the least idea of the conditions in Shahabad

President—Surely, the Imperial Council would be able to get sufficient information on the subject

Mr Henderson—They must get it from the local officials

President—From the Director of Agriculture?

Mr Henderson—Yes

President—They are all in direct touch with you?

Mr Henderson—They have appointed a Sub Committee and I am a member of it

Dr Matthai—That is a Standing Committee. I suppose that would be the sort of thing by which co-operation between the Central Council and the Provincial Departments would be established in respect of sugar

Mr Henderson—That is the theory, but in actual practice they are establishing so many Standing Committees that it is difficult to have any co-ordination

President—You are not very hopeful about the prospect of securing an extension in the number of factories by co-operation between the Local Governments and the Imperial Council?

Mr. Henderson—If the Imperial Council has got the money, all that is necessary is to give us a chance to put up our case. I think the initiative should come in the proposition of the case from the Local Government. I don't see how possibly any initiative can come from the Council.

Dr. Matthai—Supposing you assume for argument's sake that the initiative should come from the provincial authorities, do you suggest any increase of staff for the Provincial Agricultural Department to take up questions of this kind or could the existing staff do it?

Mr. Henderson—Any increase in staff would be extremely useful. We have a very small budget and a very small staff.

Dr. Matthai—What has been done by the Imperial Council so far in the way of developing research facilities in Bihar and Orissa?

Mr. Henderson—We have got recently one grant for the establishment of a cane research station.

Dr. Matthai—Where is that to be?

Mr. Henderson—We have not acquired the land. I hope to get it near Samastipur.

Dr. Matthai—What would be the work of that station?

Mr. Henderson—To test the Coimbatore varieties. In the past this work was all done by the Sugarcane Bureau in Pusa. But I understand the present idea is to remove the Sugarcane Bureau and the testing work is to be done not by the Government of India but by the Provincial Government.

Dr. Matthai—That would be the main work of this new Research Station?

Mr. Henderson—Testing our new varieties under careful botanical and chemical control.

Dr. Matthai—Would any control be retained by the Coimbatore Sugarcane Expert?

Mr. Henderson—No.

Dr. Matthai—Practically all the testing out of the seeds will be done here entirely under local control?

Mr. Henderson—Yes, it must be done.

President—Is this the scheme which the Local Government sent up to the Government of India in 1929? (Shown.)

Mr. Henderson—That has been cut out very largely. Here is the actual scheme. (Handed in.)

President—For this you are getting a grant?

Mr. Henderson—Yes.

President—Can you get a Sugarcane Specialist on Rs. 350?

Mr. Henderson—He would be a man belonging to the Provincial service. He would not really be a first class Sugarcane Specialist.

President—Your original scheme was for a Sugarcane Specialist, Assistant Specialist. It has now dwindled down to one Research Specialist on Rs. 350 and one Overseer at Rs. 100. Has that been approved?

Mr. Henderson—This has been finally adopted. (Shown.)

President—When was this scheme sanctioned?

Mr. Henderson—The actual sanction came only a short time ago.

President—Have you taken steps?

Mr. Henderson—I am trying to acquire the land.

President—That is going to be done at the expense of the Local Government?

Mr. Henderson—The Local Government are not giving any money. It is entirely done by the Central Government.

President —Have you got the Sugarcane Specialist?

Mr Henderson —I am going to acquire the land first put up the buildings and then the expert will have to be recruited by the Public Services Commission

President —What class of man would he be?

Mr Henderson —Provincial service man

Dr Matthai —What sort of training would he have?

Mr Henderson —Training in Coimbatore and a certain amount of chemical knowledge

Dr Matthai —With what experience does he start this?

Mr Henderson —A graduate of an Agricultural College with a training at Coimbatore or Shahjahanpur or any other sugarcane station

Dr Matthai —At present how is the testing of Coimbatore canes done here?

Mr Henderson —All this work is done here at Pusa by the Sugar Bureau

Dr Matthai —Have they got a special staff for it?

Mr Henderson —They have got Mr Winne Sayer, Secretary to the Sugar Bureau

Dr Matthai —Are there any Assistants?

Mr Henderson —The actual testing and agricultural work is done on the farm by the Imperial Agriculturist working in co-operation with the Sugar Bureau. The Provincial Government has no testing station at all

Dr Matthai —Will a scheme of this kind constitute a real improvement?

Mr Henderson —I don't think it is a real improvement but as the Sugar Bureau is going to be shifted to another province this will take its place

President —What is going to happen to the Sugar Bureau?

Mr Henderson —It is going to be put under the Agricultural Council

President —Where is it going to be established?

Mr Henderson —In Delhi and the Technologist will be at Cawnpore

President —Have you any other proposals?

Mr Henderson —We have got one rice research station

President —Not as far as sugarcane is concerned?

Mr Henderson —A grant of Rs 8,000 for designing a suitable sugarcane mill to be driven by power has been granted by the Imperial Agricultural Committee and some of the United Provinces' proposals affect us so very closely. We are going to send our students to their Harcourt Butler's Institute

Dr Matthai —They are mainly concerned with technology?

Mr Henderson —Yes

Dr Matthai —As far as sugarcane research is concerned, it is done mainly at Shahjahanpur

Mr Henderson —Yes

President —As regards the cost of gur could you give us the output per acre? In this case you give us only the cost of milling and so on per acre, but that is not of much use unless we know the output

Mr Henderson —We can roughly take it as 10 per cent of the cane

President —We don't know the amount

Mr Henderson —250 maunds an acre

President —Could we take this 250 maunds in each case?

Mr Henderson —Yes

President —Therefore you get about 25 maunds of gur?

Mr Henderson —Yes

President —So that in South Bihar the costs run up, without overheads, to something like Rs 34 a maund

Mr. Henderson —Yes

President —Of course these costs have no very practical value because the cultivator in making his *gur* probably does not consider the cost of his own labour or the cost of his oxen

Mr. Henderson —No. He may do a bit of other work too. Part of the day his cattle may be employed in crushing and part of the day in doing something else

President —Yes, so that really my figures which are produced as regards the manufacture of *gur* have very little practical value

Mr. Henderson —Very little indeed

Dr. Matthai —As regards this statement of prices of *gur*, is that supposed to show wholesale or retail prices?

Mr. Henderson —Wholesale prices

President —There is nothing in the agricultural conditions in 1928 to account for the sudden rise in the price of *gur* from Rs. 4 to Rs. 7?

Mr. Henderson —No, I think that in 1928 there was a good rainfall if I remember right

President —I do not know whether that made a great deal of difference in your output

Mr. Henderson —The figure you are looking at is Cuttack 1928?

President —No, Murshidpur 1928, the price rose from Rs. 4 12 to Rs. 7. In Cuttack there was a fall but in all other cases there was an increase in the price

Dr. Matthai —Those are the average prices for the whole year?

Mr. Henderson —Yes

Dr. Matthai —The average is worked out in this way. You get the fortnightly prices

Mr. Henderson —The District Officers send these figures to us. We are not responsible for the collection of these figures in any way

Dr. Matthai —They send them to you fortnightly?

Mr. Henderson —Yes

Dr. Matthai —Then, you get the wholesale prices for a whole year and divide them by the number of fortnights. The average obtained in that way may be very misleading

Mr. Henderson —Yes

President —But there is nothing in the climatic conditions of the year to account for this rise. Your output of crop from the whole province in 1928-29 is 99

Mr. Henderson —There is no difference in the area under cane for that district. It stood steadily at 22,000 acres for 10 years

President —At any rate there is no outstanding factor which can explain this rise?

Mr. Henderson —I cannot explain it

President —But actually in Bihar the market is so local that it is quite possible that no particular reason can be assigned

Mr. Henderson —Yes

President —What are these different methods of planting which you have mentioned—the Shahjahanpur method of planting and the Sahou method of planting?

Mr. Henderson —In Shahjahanpur they put the cane setts down very deeply. When Mr. Burt was here he tried that method but it has not been particularly successful. The yield was low. The way we do here at Pusa is to put the setts in shallow furrows

President —Your indigenous method is the Sahou method?

Mr. Henderson —They call it Sahou method. It is really a method which we elaborated here at Pusa

Dr Matthai—Looking at these figures Co 213 is the best from the point of view of yield, from the point of view of sucrose content and also of purity.

Mr Henderson—Yes, but the difficulty about Co 213 is that it needs fairly good conditions. Adverse conditions affect it much more than other varieties.

Dr Matthai—What sort of conditions do you mean?

Mr Henderson—Water logging, shortage of moisture, etc.

Dr Matthai—Those things affect it adversely?

Mr Henderson—Yes.

Dr Matthai—Taking the various kinds of Coimbatore canes which you have tried out, which is the best?

Mr Henderson—There is nothing to beat Co 213 under normal conditions so far. No variety will be pushed unless it is definitely proved that it is better than Co 213. Any new variety will have to be widely grown and properly tried out by a mill trial.

Dr Matthai—You have had sufficient opportunities of testing Co 213?

Mr Henderson—Yes.

Dr Matthai—So, Co 213 is fairly established, so far as normal conditions are concerned?

Mr Henderson—Yes.

Dr Matthai—It is rather important that when you have some abnormal conditions the cane should have resistant power.

Mr Henderson—Yes.

Dr Matthai—Taking that into account which of these do you consider best?

Mr Henderson—Co 213 for normal conditions and one of the others for abnormal conditions. We have a special cane 205 for badly flooded land and another variety 214 when early ripening is required.

Dr Matthai—We heard a suggestion that Coimbatore canes have a habit of deteriorating after a time. What exactly is the correct position?

Mr Henderson—I think it is largely due to this. As they spread out further and further, there is more danger of mixing and careless treatment and careless sowing instead of using the best sets and rejecting inferior sets. That is one big reason.

Dr Matthai—If you are sufficiently careful, if suitable safeguards are provided, there is really no reason why Coimbatore canes should deteriorate?

Mr Henderson—Not as far as I can see. We have 213 grown in the south of Orissa which is about as good as anything showing no signs of deterioration.

President—Generally speaking in your province, so far as the unirrigated area is concerned in your opinion apart from any improvement in the process of manufacture, you see no prospect of any reduction in the cost of white sugar?

Mr Henderson—No.

President—As regards the rest of the province which is irrigated, you think that by the introduction of improved varieties of cane there may be considerable expansion in output?

Mr Henderson—I agree to that.

President—Which might be approximately an increase of 50 per cent?

Mr Henderson—There is one other problem which comes up there. If a man is growing cane and is dependent on the monsoon, sometimes the monsoon is late and he loses a crop or there is deterioration in his crop. Therefore he is not prepared to put up a lot of money in manure, but where the crop is safeguarded by irrigation he can safely spend more money in manure. Up here it won't pay to spend much money on cane, whereas if he is safeguarded by canals, the case is different.

President —Take the district of Shahabad. I gather from what you say that an all round increase of 50 per cent in cane on account of the introduction of improved varieties would not be really unexpected.

Mr Henderson —An all round increase in yield?

President —Yes.

Mr Henderson —Per acre?

President —Yes.

Mr Henderson —What I meant was an increase in area.

President —Owing to the improved varieties do you think that the output is likely to increase?

Mr Henderson —With Co 213, we have quite a good variety. There is really needed more improvement in the technique, more improvement in manuring etc. Where 213 is well grown it is very good indeed.

Dr Matthai —Where Co 213 is well grown, you get an average yield of 800 maunds.

Mr Henderson —Yes, we can certainly expect that.

Dr Matthai —As against the North Bihar average of 200 to 300 maunds.

Mr Henderson —Yes.

President —Does Shahabad come under South Bihar?

Mr Henderson —Yes, it is canal irrigated.

President —There your estimate of cost of cultivation is Rs 90. You have an output of 800 maunds and the cultivation cost is Rs 90.

Mr Henderson —That is at present, where they don't use much manure.

Dr Matthai —All the improvements in technique will put up the cost?

Mr Henderson —Yes, and the yield also will go up.

President —Supposing Coimbatore improved varieties were grown and the improvements in technique introduced?

Mr Henderson —If you are going to grow a thick cane, Co 213 is not a thick cane. It is really suitable for non-irrigated areas but has done quite well in irrigated areas. But I think that if you have got a genuine thick cane you will probably get a bigger yield, and a better quality cane. It would not be worth growing it here because it is more delicate and involves more capital.

President —Let us take your present cost which is Rs 90 in South Bihar. It is an irrigated area and you are getting 500 maunds of cane.

Mr Henderson —Yes.

President —That would give you roughly about 45 maunds of sugar.

Mr Henderson —Yes.

President —That will only come to about 9 annas a maund if you produce 500 maunds.

Dr Matthai —When you speak of thicker canes are there any Coimbatore varieties that answer to this description?

Mr Henderson —We have not introduced any thick canes. We must have thinnish canes for the non-irrigated area. We would not touch a thick cane where there is no irrigation.

Dr Matthai —They could try it in Shahabad?

Mr Henderson —Yes, it would be an ideal place for that.

Dr Matthai —What is the particular Coimbatore variety?

Mr Henderson —We started off with Co 213.

Dr Matthai —Is there a thick Coimbatore variety?

Mr Henderson —There is but we have not properly tested any. The 213 grown in Shahabad is from Pusa.

President —Do you think that the rate of 9 annas a maund which we worked out now is the possible rate in the Shahabad district?

Mr. Henderson —It might be quite possible but it is not the average

President —Could you give us any sort of idea as to what is the average rate there at present?

Mr. Henderson —I think it would be somewhere about 4 to 4½ annas

President —That you think could be reduced by the introduction of better varieties and improved technique?

Mr. Henderson —Yes

President —What do you think that could be reduced to?

Mr. Henderson —To about 3 annas a maund

President —So that really the Shahabad district is very much better suited for sugar factories than North Bihar?

Mr. Henderson —Yes I am strongly of that opinion

President —Could you give us any idea of the average cost of cartage to the factory per maund?

Mr. Henderson —That is very difficult to say

Dr. Matthai —The average distance that cane can be transported without serious risk to quality let us say is 20 miles

Mr. Henderson —I know of cane from south of Muzaffarpur going to Saran

Dr. Matthai —Supposing the radius within which cane can be collected is 20 miles, the average distance from which cane will go to a factory will be in that case 10 miles. What will be the cost of transport over a distance of 10 miles by cart?

Mr. Henderson —The average cart takes 10 maunds for delivery of 10 maunds one trip a day the man and cart will get Re 1-8. That is under ideal conditions

Dr. Matthai —That is 2 4 annas a maund

Mr. Henderson —Something like that I believe cane is crossing on some of the railways

President —What other charges has the cane got to bear?

Mr. Henderson —Weighing charges

Dr. Matthai —Have you any kind of approximate figure for that?

Mr. Henderson —That is very small

Dr. Matthai —Transport charges are the most considerable item?

Mr. Henderson —Yes

Dr. Matthai —So that cane costing about 4½ annas at the farm would reach the factory at about 7 annas on an average?

Mr. Henderson —I think so

Dr. Matthai —You give us a figure of Re 1-8 for 10 maunds, that is 2 annas a maund

Mr. Henderson —A lot of it comes from places much closer than that

President —I think we could find this out from the actual costs of the factories more accurately

Mr. Henderson —Yes

Dr. Matthai —Is it the general practice for the grower himself to deliver cane to the factory?

Mr. Henderson —No. The Simastipur people make their own arrangements, but I believe in the Saran side it is bought from the cart. The cultivator brings the cart to the weighbridge and sells the cane

President —Where is the Pursa sugar factory?

Mr. Henderson —It is near Bettiah. They own a good deal of land on which they grow cane

President —We have got no application from them. Then Japla factory, where is that?

Mr Henderson — That is also largely a zemindari factory The fact grows most of its own cane

Dr Matthai — What sort of capacity has it?

Mr Henderson — It is a very big factory

Dr Matthai — About 300 mounds of cane a day?

Mr Henderson — Much more than that

President — Do you think these people will show us their cane cultivation account?

Mr Henderson — I don't think they have got any scientific costings

President — We would not get very much out of their costs?

Mr Henderson — I don't think so

Dr Matthai — Is there any individual here who would be able to talk to us about the detailed costs?

Mr Henderson — Yes (Hands in a list)

DIRECTOR OF AGRICULTURE, BOMBAY

**Oral Evidence of Mr T F. MAIN, OBE, Rao Sahib B P
VAGHOLKAR and V. G PATWARDHAN, recorded at Bombay
on Saturday, the 14th September, 1930**

President—Mr Main, you are Director of Agriculture, Bombay?

Mr Main—Yes

President—We understand from the Bombay Government that they do not wish to express any opinion as to whether protection is in the interests of the Bombay Presidency or not before they have the report of the Tariff Board before them. So we understand that you are appearing before the Tariff Board in your personal capacity and no expression of opinion will commit your Government in any way?

Mr Main—That I think is the best way of looking at it

President—I think our best plan is to run through your replies to our questionnaire. The most important part of the Presidency as far as sugarcane is concerned is the Deccan Canal Area?

Mr Main—It is definitely the most important, I should say that it is the essential area of the Presidency

President—You say that in the Southern Division of the Carnatic the quality of the sugarcane is better. Are there any climatic or soil reasons for that?

Mr Main—I think it is mainly a question of manufacture. I understand they leave less water in the gur there

President—I suppose the kind of cane there is very much the same as elsewhere in the canal area? Is it pundi?

Mr Main—No. In that area they grow a thinner cane but I don't think that is the probable reason, it is probably the cultural and manufacturing processes

President—In stating the natural advantages of relative zones in your Presidency, I see that in the South Central Division you state that there is supply of canal water and in the North Central Division you state that there is cheap water. Is there any great difference in the irrigation rates between the two areas so far as you are aware?

Mr Main—I think that perhaps is not a very clear distinction. The reason for putting in cheap water is that the rates there are less

Rao Sahib Vagholkar—The rates vary from Rs 7 to Rs 10 per acre for all the crops in the cane rotation including cane

President—And in the South Central Division?

Rao Sahib Vagholkar—For cane it is Rs 45 and for the rest of the crops—there are different rates according to the crop and according to the different seasons

President—It is only in the North Central Division in regard to certain irrigation canals that the rates are cheap?

Mr Main—In the North Central Division there happen to be irrigation works where smaller rates are charged

President—Is it canal irrigation there?

Mr Main—Yes. Small canals consisting of certain minor works

President—There is no uniformity of rates at all?

Mr Main—I shouldn't put it that way. I should say there is uniformity of rates but there is a distinction made for certain small canals where facility is not so good as on the principal canals

President —Is the distinction made with reference to capital cost or with reference to agricultural requirements?

Mr. Main —I think it (the rate) is more with reference to the certainty of being able to provide water.

President —It is really in reference to the needs of the cultivators that a lower rate is levied?

Mr. Main —Where the conditions are less reliable, that is how I should put it.

Dr. Matthai —In the Deccan canal areas the total area irrigated is 40,413 acres. Is that the area under cane?

Mr. Main —That is the area under cane.

Dr. Matthai —Later on in answer to question 7 you give the area in the Deccan canal under cane as 19,932 and I was wondering if this 40,413 acres was the total area under irrigation served by the canal system.

Mr. Main —This applies to both the North Central and the South Central Divisions and includes well irrigation. That has not been made clear there whereas the figure in the second statement refers to our major canals.

Dr. Matthai —The major canal area is about half of that?

Mr. Main —Yes. It has come down, we usually reckon on 20,000 acres on the major canals.

Dr. Matthai —Would it be possible at all to say what proportion of the land would at present give the output 50 tons per acre? You say in certain cases they are able to reach as high as 50 tons per acre. I suppose that is very exceptional?

Mr. Main —There are a certain number of high class cane growers on the Nira left bank canal and also on the Godavari who can get that, but they are the top men.

Dr. Matthai —I am trying to take a long view. Would it be a reasonable suggestion to make that in course of time a considerable part of the canal area might be expected to reach this figure?

Mr. Main —I would not say that.

President —It depends on the class of soil?

Mr. Main —Very largely on the class of soil but mainly on the standard of cultivation.

President —I gathered the idea at Poona when we examined some of the cultivators that these very heavy yields are only obtained by an extremely liberal application of manure.

Mr. Main —That is the general rule. But I think I showed you a crop at Manji farm where a yield of this magnitude was expected and it was being got without very heavy manuring.

President —I don't say it is not possible, but so far as I could gather from the cultivators who had actual experience of sugarcane cultivation on their own lands, they were obtaining very heavy crops, but in order to obtain them they had to apply manure to such an extent that it was doubtful whether from the commercial point of view it would not be more satisfactory to obtain smaller crops at less expense.

Mr. Main —Owing to the boom that set in during war time and immediately after, the tendency was to manure lands extremely heavily and then when prices came down this heavy application became uneconomic. The practice is coming down, but coming down more slowly than the economic situation justifies.

Dr. Matthai —It would be a very satisfactory argument from the point of view of protection for the sugar industry in this part of the country if a yield of not necessarily 50 tons, but something approximating to it could be postulated, because then the cost of cane per unit of sugar might almost be comparable with the imported sugar.

Mr. Main — I don't think that would be safe. I merely put down this figure as indicating what can be achieved under the favourable conditions of the Deccan.

Dr. Matthaei — The average is likely to be considerably short of 50 tons?

Mr. Main — Yes.

President — Could you give us any idea, without any improvement in the present canes planted, what average output could be obtained by the cultivator?

Mr. Main — From 35 to 40 pallas.

President — That is in terms of gur?

Mr. Main — Yes.

President — About $3\frac{1}{2}$ tons, roughly, that comes to 85 tons of cane per acre.

Mr. Main — A short ton of cane will give you a palla of gur.

President — It is somewhere about 85 to 40 tons.

Mr. Main — Yes, short tons.

President — With improved standard of cultivation?

Mr. Main — With reasonable manuring.

President — What portion of your sugarcane area would be considered to be in the tropical zone?

Mr. Main — It is all within a very narrow tract.

President — I suppose the kinds of cane which are suitable in the tropical zone should also be suitable in the Deccan Canal Area?

Mr. Main — That is our general experience.

President — In Sind it is subtropical?

Mr. Main — It is very different. It approximates to Northern India.

President — Supposing cane were to be cut out of your agricultural system altogether, what would be the effect on other crops? Can you find a substitute in your rotation?

Mr. Main — It depends on from what standpoint you are looking at this question. From the standpoint of the canals running successfully, it is generally held that cane is indispensable.

President — Taking India as a whole, supposing the argument was put forward that really the cost of producing cane was very high, and that it would be advisable to leave the supply of sugar and gur to other countries and in place of cane cultivate other crops for export. Would there be any insuperable difficulty in this from the agricultural point of view, for example, would rotation be seriously interfered with?

Mr. Main — I think it is certainly safe to say that the elimination of cane would jeopardize the whole system of canal cultivation in the Deccan because we regard this as the key crop. All the manure practically goes into the land because of the cane and it is an incentive to the owner of the land to level his land and make it suitable for irrigation. If that incentive is taken away the method of cultivation would deteriorate and he would irrigate sloping land and all that sort of thing.

President — That is what I wanted to ascertain. If you were to eliminate the cultivation of cane the standard of cultivation in the irrigated areas would go down?

Mr. Main — Yes.

President — And possibly the output of the crops which now follow cane would be affected to a certain extent?

Mr. Main — Yes, because people would not manure the lands to the same extent and the tendency would be to irrigate without manuring which would result in the long run in the fertility going out of the soil.

President — So that in your view the whole scheme of agriculture in the irrigated areas would be definitely dislocated if the area under cane was reduced to a very considerable extent?

Mr. Main —I accept that very definitely

Dr. Matthai —So that both from the point of view of standard of cultivation and from a purely financial point of view, the assumption is that sugarcane is the main cash crop and sugarcane cultivation must be made worth while?

Mr. Main —Yes

President —What about well irrigation? Well irrigation is used almost entirely for garden crops?

Mr. Main —A few years ago in this Deccan zone the proportion of canal cane and well cane was about 50-50, but in the last few years there has been a drift over from the well to the canals and now well irrigation is 10 per cent or less of the total area of cane.

President —Supposing we were to eliminate cane from well cultivation what would be the effect?

Mr. Main —You can run a well without cane because there are alternative crops. The trouble of marketing does not come in so greatly. For instance you can grow chillies in limited areas, that is to say in well irrigation you would have a large number of special crops in small areas separated by considerable distances.

President —These crops if they were grown in large areas would be difficult to market, but the marketing problem does not arise in the case of well irrigation?

Mr. Main —No

President —What is the standard of productivity in well areas?

Mr. Main —It is lower. I think the standard can be fairly well maintained for other crops because they do manure these garden crops.

President —Is well irrigation confined more or less to garden crops?

Mr. Main —It is

Dr. Matthai —I suppose it is correct to say that if a sugar factory wants to have one acre continuously under cane it needs to have under its control three to four acres of land?

Mr. Main —Preferably four.

President —But if it grows no crops in rotation but merely leaves the land fallow and it does not grow cane, then I suppose the proportion of the area under cane can be increased.

Mr. Main —The objection to shortening is the danger of waterlogging and the danger of spoiling the texture of the soil. The amount of water put on to a cane crop is a very huge figure when you add it up, it runs to the magnitude of 100 inches and from the agricultural standpoint putting 100 inches on the soil is inclined to make the soil sticky. It definitely spoils the texture and the importance of the rotation is to give the land time to recover its texture.

President —But at Belapur we found that roughly they were growing cane on one third of the area.

Mr. Main —That is fairly common.

President —Is there anything objectionable there? Two-thirds they are allowing to be fallow.

Mr. Main —It is considered the minimum desirable.

Dr. Matthai —May I take it as authoritative that the best kind of cultivation would be 1-3?

Mr. Main —We have been gradually going over towards 1-4 in preference to 1-3, because some of the rotation crops can be grown better if we sow them early. It means sowing them in the hot weather. That means irrigation water going on to the soil in the hot weather. If you do that, then you want to widen your rotation so as to compensate. We want to keep the water off the land in the hot weather as far as possible and that is one of the chief reasons for advocating wider rotation, but where rotation crops are a matter of comparatively little importance—as seems to be the case in factory lands—then that difficulty doesn't arise so that 1-3 is quite suitable, I should say.

President—In answer to question 7, it appears that you advocate the practice of ratooning. Does this practice lead to the spreading of disease?

Mr. Main—Where disease is prevalent, it has assisted it. If you had red rot in your land, it would be advisable not to ratoon. As a matter of fact I don't know whether this should be read in that light. Our experience is that when a new canal is opened, you get excellent results by ratooning and then by 20 to 30 years your lands gradually become unsuitable for ratooning. The outbreak shrinks.

President—What is the reason for that?

Mr. Main—It is the same reason as for the texture, the continuous irrigation for all this period. You have grown perhaps 10 crops of cane in a period of 80 years. The ill effect is accumulated to some extent on the texture and we think that that is the explanation. It is a matter that requires research, but as far as we know at present that is the explanation.

President—To what extent is the texture of the soil out of control?

Mr. Main—I should say it is almost out of control if you go in for heavy ratooning. You can't do much to offset the effect of heavy ratooning, but with limited ratooning the amount of bulk manure you apply has a counteracting effect and you can keep your land in fairly good texture.

Dr. Matthai—The adverse effect of over irrigation can to a certain extent be made up by suitable manuring?

Mr. Main—Yes, by bulky manuring.

President—Would you consider for instance a soil which was at present not suitable for cane growing would perhaps in the course of 20 years be able to alter in its texture so as to be more suitable for cane?

Mr. Main—Provided you don't at the same time destroy the object of the treatment. For instance in comparatively shallow soils, where the texture doesn't suffer so much as a rule, continuous tillage over a period of years definitely improves the soil.

President—I was thinking more of this particular type of soil in Belapur, clay soil suitable for wheat cultivation. It is rather unsuitable for cane. Could the type of soil be changed, supposing the company goes in for intensive cultivation and heavy manuring for a period of years?

Mr. Main—I think one should distinguish between the deep soils and the shallow soils. Continuous ploughing on the shallow soils has a definite improving effect. On the deep soils unless it is accompanied by manuring with bulky manures, I don't think it will have any special improving effect upon the texture.

President—Supposing it was manured with green manure?

Mr. Main—That is what we call bulky manure. It opens up the soil.

President—There is some hope so far as the productivity of the soil is concerned?

Mr. Main—Yes.

Dr. Matthai—What are the items on which you save your costs in ratooning? You avoid the cost of sets.

Mr. Main—That is certainly one item.

Dr. Matthai—Do you get any saving under manure?

Rao Sahib Vaghalkar—We have given figures for that. Please see the accompaniment to reply to question No. 10. There we have under item (1) ploughing, pulverizing, ridging, discing and levelling Rs. 40 under (2) bunding, making channel and repairing Rs. 12.8 under (3) sets Rs. 72 under (4) cutting, supplying arranging and planting Rs. 10 and under (5) weeding Rs. 20.

Dr. Matthai—You don't apply farmyard manure?

Mr. Main—No.

Dr. Matthai—Could you get a better yield in your ratoon crop if you did use farmyard manure?

Mr. Main — We have not made any experiments

Dr. Matthai — The items on which you would save your costs on ratooning are 1, 2, 3 4 and 5?

Rao Sahib Vagholkar — Yes

Dr. Matthai — As regards water it will be about the same?

Rao Sahib Vagholkar — Probably less, because it is harvested early

Dr. Matthai — One might roughly say preliminary work on the land, manuring and the sets?

Rao Sahib Vagholkar — Yes

President — Your average output is fairly high for ratooning?

Rao Sahib Vagholkar — 90 pallas

President — It is a good deal higher than what is obtained at Belapur

Mr. Main — Yes

Dr. Matthai — That is about 28 tons of cane At Belapur it is about 17 34 tons

Rao Sahib Vagholkar — That is their estate average

Mr. Main — This is on the new canals This will go down as time goes on

President — You could not expect to maintain this yield for a series of years?

Mr. Main — No, if it is put under cane over 10 times

Dr. Matthai — What is the number of ratoon crops for which you have given costs?

Rao Sahib Vagholkar — The canal is working for the last 15 years and there might be 6 or 7

President — Can you state definitely how many ratoons have been taken?

Rao Sahib Vagholkar — Since before the war say 6 or 7

President — Are these figures 17 years old?

Rao Sahib Vagholkar — These figures are from the Godavari canals, and extend back over a period of 17 years

Dr. Matthai — In the old canals you have given up ratooning

Rao Sahib Vagholkar — For the last 13 or 14 years

Dr. Matthai — I am trying to get some idea as to when a canal from the point of view of ratooning ceases to be profitable? When you have taken 10 ratoon crops in one of these canal areas, is it likely that the point of diminishing return would be reached?

Rao Sahib Vagholkar — It will depend on how it is treated in the next few years with regard to the rotation

Dr. Matthai — Speaking generally is it possible to hazard a kind of approximate figure?

Rao Sahib Vagholkar — It is not possible at this stage The land is kept fallow after ratooning When we take ratooning they are given six years rotation Supposing a man has got only 4 years rotation, naturally, his soil would deteriorate earlier than the soil of the man who has adopted a six years rotation Of course we can't speak definitely on this point

President — You have grouped the principal varieties of canes under three types The first type is juicy canes pundi type What are the other two types? Are they included in hard canes?

Rao Sahib Vagholkar — Yes Khadya type

Dr. Matthai — That is more or less an indigenous variety?

Mr. Main — Yes

President — These red canes Cavangeri type, are they indigenous too?

Mr. Main — Some of them, but Cavangeri was imported many years ago

President — This Khadya type, is that really a suitable cane for the Deccan area?

Mr. Mann — I should not recommend it for the canal area

President — Is it used largely by the cultivators?

Mr. Mann — Not on the canal area. It is the cane which is grown on the minor works in Khandesh and Nasik

President — It is a very sweet cane? It has a fairly high sucrose content?

Mr. Patwardhan — Extraction is very low in all these hard canes

President — Extraction is done by ordinary bullock mills?

Mr. Patwardhan — Even in the case of power mills the extraction doesn't increase much

President — Why?

Mr. Patwardhan — These are very hard compared to juicy canes

President — Where the cane is hard, the difference between extraction by a power mill and extraction by a bullock mill is very considerable

Mr. Patwardhan — Yes, the difference is considerable. Even if you have power crushers, the extraction won't be increased proportionately as much as in soft canes

President — I understand the softer the cane the more suitable it is for the bullock mill and the less the additional extraction you would get by using the power mill, and the harder the cane the less suitable it is for the bullock mill and the greater the extraction you would get by using the power mill

Mr. Patwardhan — That increase would not be much

Dr. Matthai — Even with a power mill you don't think the extraction would be much?

Mr. Patwardhan — No

President — What does it give on the Khadya type?

Mr. Patwardhan — 55 for bullock mill and 58 for power mill

Dr. Matthai — It might be a suitable cane for sugar factories?

Mr. Patwardhan — Yes. There will be no consideration for hardness

Dr. Matthai — Where you have crushers?

Mr. Patwardhan — No

President — I understand that your experiments in the Bombay Presidency are directed almost entirely to finding suitable canes for the manufacture of gur

Mr. Mann — Our problem has so far been gur

President — So far you have not diverted your attention to the question of sugar proper?

Mr. Patwardhan — Incidentally we have. We keep a record of the canes which we tested at Manji and from that record we can draw up statements showing which are sugar canes and which are gur canes

President — My point is this: in deciding on what particular cane to experiment you select a cane which at any rate *prima facie* appears to have possibilities for gur manufacture

Mr. Patwardhan — Yes, but we don't rule out the other

President — You would prefer to carry out experiments on soft cane rather than on hard cane, soft cane being more suitable to the bullock mill?

Mr. Patwardhan — We have to take other factors into consideration, viz., that some canes are more thrifty for many years than others. Co. 218 is cheaper to grow than Pundia. We have to compensate that against the hardness of extraction

Dr. Matthai — The only respect in which canes would differ as between gur and white sugar is the question of hardness?

Mr. Patwardhan — Very much so

Dr. Matthai — In all other respects considerations are the same?

Mr. Patwardhan — Yes

President —You have given the sucrose content of Pundia as 14 to 16 per cent. Is that the result of your experiments in your farm?

Mr. Patwardhan —We have got a very long record of the sucrose content of this particular cane.

President —Where was the cane grown for experimental purposes?

Mr. Patwardhan —At Manju farm.

President —It would not necessarily hold good for areas of different soils?

Mr. Patwardhan —There might be some variation.

President —At Belapur on a year's records the content was found to be 11 per cent.

Mr. Patwardhan —It varies. It goes up to 17 per cent.

President —We were told that they were not able to rely on so high a sucrose content for manufacturing purposes.

Mr. Patwardhan —Yes.

Dr. Matthai —You are making experiments with other canes. You have got some results which are probably better than these?

Rao Sahib Vagholkar —We have a number of varieties.

Dr. Matthai —Which are the most promising of these canes with which you are experimenting?

Rao Sahib Vagholkar —Striped D 100, H M 541, H M 89 and J 218.

Mr. Mann —For *gur* in the centre of the statement you will find the list given in the order of merit.

Dr. Matthai —That is from the point of view of *gur* manufacture?

Mr. Mann —Yes, and in the second last column you will find the list given in the order of merit for sugar.

Dr. Matthai —What is the order of merit?

Mr. Mann —For *gur*?

Dr. Matthai —There are three columns in which you note the order of merit.

Mr. Lalwarthan —Tonnage we have not taken into account.

Mr. Mann —If you want the order of merit for *gur* please look at the centre column.

Dr. Matthai —That puts No. 7 first, No. 6 second, H M 89 third and more or less the same order is followed in the other case.

Mr. Patwardhan —Yes.

Dr. Matthai —So that practically you consider the striped D 109 and H M 544 and H M 89 is the most promising?

Mr. Patwardhan —For both purposes.

Dr. Matthai —For both *gur* and sugar?

Mr. Patwardhan —Yes.

Dr. Matthai —Are these canes now tried by rayats at all on a considerable scale?

Mr. Patwardhan —Not as yet.

Dr. Matthai —How long have you been experimenting?

Mr. Patwardhan —Six years. These are the average figures of the last six years. Some of these have been tested at Belapur.

Dr. Matthai —Apparently now there is very little of these in Belapur.

Rao Sahib Vagholkar —That is right.

Mr. Mann —This is the order of merit subject to certain limiting factors.

Dr. Matthai —Such as?

Mr. Mann —One is lateness.

Dr. Matthai —I don't understand the point.

Rao Sahib Vagholkar —Supposing it can be ready in 18 months.

Dr. Matthai — Does this take a longer time?

Rao Sahib Jagholkar — If it takes a longer time it does not fit in with the block rule because more overlapping is required but is not allowed. It interferes with the cultivators' work.

Dr. Matthai — That is the same problem that you get in regard to Adsal crop?

Rao Sahib Jagholkar — Yes.

Mr. Main — The point I want to make clear is that this order of merit is subject to certain considerations from the cultivators' point of view. "Striped D 109" theoretically ought to cut out and replace Pundia but the reason why it does not is because it anthers.

President — What is the defect?

Mr. Main — Anthering is flowering. They don't like it. It does not fit into the Adsal season.

President — How does the flowering affect the plant?

Mr. Main — After anthering it does not grow. The Adsal crop stands for 18 months and if it anthers before it has gone through 18 months the crop comes to maturity before they want it to come to maturity.

President — In other words it cannot be grown for 18 months?

Mr. Patwardhan — It stops growing when it flowers.

Rao Sahib Jagholkar — The second reason is that in respect of the growing period it is definitely longer than Pundia by two or three months.

President — That means it will lose the market?

Mr. Main — Yes. We have a great variety of canes with various good points and none of them taking everything into consideration is yet able to knock out Pundia but we have not probed into it further. We hope that the Coimbatore Imperial Station will now give more attention to our requirements and give us a cane definitely superior to Pundia without these disadvantages.

Dr. Matthai — Even in the matter of outturn, the canes which you have mentioned are not the best word. You hope to get a higher outturn than this 84 tons per acre?

Mr. Main — Yes.

President — The position I suppose is that Coimbatore Experimental Station has been devoting its attention to producing canes suitable for the United Provinces?

Mr. Main — Yes, for Northern India.

President — So that the presumption is that the Coimbatore canes which they have been trying would not be the most suitable canes for this part of India?

Mr. Main — That is so. We are now hoping that now that they have been working on noble canes for some years they will be able to give us a variety which will be definitely superior to Pundia. It will probably mean opening a new station in the Deccan area.

President — In any case before you show any results 10 or 15 years must elapse.

Mr. Main — We will be able to show results in less time than they took in the United Provinces.

President — Coimbatore is turning its attention to thick canes only now?

Mr. Main — No, they have started work three or four years ago.

President — How long would it take for them to evolve a cane?

Mr. Main — They may have something even now.

President — Supposing they have, they will have to send it to you?

Mr. Main — Yes, to satisfy us.

President — You will have to test that on a number of different soils and come to certain conclusions. You have to grow a sufficient crop for sets and the cultivators have to extend the cultivation. All this will take time.

Mr. Main —Yes, but I think some experience has been gained at Belapur. In the case of U. K. 28 they have done it within three years.

President —I think we were told that it would take them seven years to introduce a new variety on a considerable scale.

Dr. Matthai —You have not made any experiments with U. K. ?

Mr. Main —We have tested it on a small scale. The proportion of increase from year to year is 20 to 1, that is to say one acre of this year's crop would plant 20 acres next year if devoted to that purpose.

Dr. Matthai —You have not made any experiments?

Rao Sahib Jagholkar —Only recently we have introduced U. K. We have been trying for the last 2 or 3 years. We cannot say anything definite now.

Dr. Matthai —You have had no experience of P. O. J. ?

Rao Sahib Jagholkar —Only for the last two years.

President —So that, as far as the Deccan is concerned, the problem of improving the species of canes and thereby increasing the output remains to be tackled.

Mr. Main —That is so. None of the varieties tested shows signs of proving ultimately successful but our chief hope lies in the co-operation of Coimbatore.

Dr. Matthai —On that point is there any proposal for a Coimbatore sub-station here?

Mr. Main —There is a proposal. It has come up in two forms. One is a definite suggestion from the head of that station that he should open a sub-station in the Deccan but I am doubtful whether that will ever mature. Perhaps the Government of India may not approve it. It has also come up in another form as part and parcel of an Imperial Research scheme for sugar in the Deccan. At present we are hammering out a research scheme—I mean the Bombay Department and the Imperial Council of Agricultural Research—and that scheme will embrace a breeding station.

Dr. Matthai —What other aspects would it cover?

Mr. Main —Economics is very important.

Dr. Matthai —Would it cover the kind of experiments on a small scale you are now making?

Mr. Main —It will include fundamental research on a larger scale.

Dr. Matthai —And combine breeding with it?

Mr. Main —Yes, including that. Physiology of the cane crop would be another item, and economics would be another very big item. We want to bring down the costs further than we have so far done.

Dr. Matthai —That scheme is now being discussed by the Provincial Government and the Imperial Council?

Mr. Main —Yes, it is being hammered out.

President —I suppose you will pay attention also to soil?

Mr. Main —Very much so. In this scheme that work is a prominent item.

President —I see that the Department of Irrigation (Development and Research) have spoken of the tendency of imported varieties of cane to deteriorate. Have you any experience on that particular point?

Rao Sahib Jagholkar —We have no data to that effect. We have done six years' research and we don't see that they are deteriorating.

President —We shall ask the Irrigation Development and Research when they come before us. So far as you are aware, is there anything in that?

Mr. Main —The only point on which I have some evidence is that the tonnage has shown signs of contracting, in the last four or five years the margin has contracted. That is about the only evidence of deterioration. I don't like to call it deterioration because it may not be actually due to that.

President —In our enquiry that aspect of the matter is an important one. So far as we can see at present the main hope of the sugar industry in India

lies in the increase in the output of cane and consequent reduction of cost by the introduction of new canes either from Java or by crossing in India

Mr. Main — That is true

President — But if these canes tend to deteriorate progress will be difficult

Mr. Main — I don't think we should pay much attention to that conclusion. For instance, when you evolve an improved cotton from the local strain, it does not remain pure for all time. We find that we have to have an organisation whose activities are directed to seeing that good seeds go out regularly from the centre. I shall give you an example. In the Southern Division we have introduced an improved strain of Kumbha cotton and we have an organisation which controls six generations, starting with the small crop on the experimental farm. We have to multiply it and spread it in the first instance amongst three villages of about 7,000 acres where the seed is multiplied under our supervision. Then the Co-operative department steps in and does it on a much bigger scale and then finally it goes to the whole country side. Hence when introducing an improved cane you must contemplate a regular succession of high class sets going out.

President — That will be a difficult matter with cane because it takes a longer time.

Mr. Main — The proportionate increase is more favourable than in the case of cotton if you multiply at the rate of 1 to 20. Further it would not require such frequent replenishing.

President — It is a problem, the difficulty of which would not be insuperable?

Mr. Main — I don't think so. With cotton we have considerable difficulty whereas with cane, it won't be so difficult.

Dr. Matthai — I suppose it is a matter of general experience in most of the sugarcane producing countries that you have a periodical replacement of types of cane?

Mr. Main — Yes. That was the old theory. An improved potato first came on to the market and held the country for some years and then disappeared. It was replaced by another strain of potatoes. The view was that it was due to deterioration that it had to be replaced, but now the explanation was admixture and impurity.

President — Formerly in Java the whole area was planted with E. K. and now P. O. J. has taken its place.

Mr. Main — Yes. I believe so.

Dr. Matthai — If you could maintain the purity there is no reason why deterioration should take place?

Mr. Main — If you are absolutely sure about the purity you should be able to maintain the yield. I mean if the strain is pure there will not be any deterioration in output. Of course we have not had sufficient experience to say definitely whether there would be really any deterioration or not. But we have not noticed any change. The sucrose content has not gone down over a period of years.

President — The next question is about costs. Your total cost is Rs. 618. That is the average?

Rao Sahib Vagholkar — Yes.

President — How did you arrive at it?

Rao Sahib Vagholkar — By making enquiries of several cultivators.

Mr. Main — By personal enquiry.

President — The cost which the cane growers gave at Poona was considerably higher than this.

Rao Sahib Vagholkar — This is the cost up to harvesting.

Dr. Matthai — The cost that they gave included the cost of harvesting and boiling. If you add Rs. 188 to Rs. 618, it comes to about Rs. 750 as against then Rs. 880.

Rao Sahib Vagholkar — Their cost might be more.

President —So that it is a little below the estimate of cost which we got from Poona

Rao Sahib Vagholkar —They clearly said that that was the amount spent by the best cultivator. This is the average. The only difference between theirs and this is in manure

President —What would be the outturn?

Rao Sahib Vagholkar —35 pallas of gur

President —And their output is more than that? There is 40 tons so that their cost was bigger but their outturn was bigger too

Rao Sahib Vagholkar —Yes

President —Your costs given here are considerably higher than the Belapur costs

Rao Sahib Vagholkar —That is so

Mr. Main —I think they use no farmyard manure at Belapur

President —They do Rs 25-8 0 per acre farm manure

Mr. Main —Against Rs 90

President —The main difference in the cost comes in manure?

Rao Sahib Vagholkar —They have no bunds, then less number of setts. They have 10,000 setts

Dr. Matthai —And this is 12,000?

Rao Sahib Vagholkar —Yes

President —You take the value of your setts at what figure?

Rao Sahib Vagholkar —It varies according to the rate of gur. Supposing the rate of gur is Rs 20 one-third is the rate of 1,000 setts

Dr. Matthai —What is the usual formula. If gur is Rs 21 a palla then Rs 7 for 1,000 setts?

Rao Sahib Vagholkar —Yes

President —I suppose the correct way of calculating the setts would be the cost of growing your setts. It might be about Rs 6. What does it cost you to grow 1,000 setts?

Rao Sahib Vagholkar —Rs 30

President —That is nearly half the figure

Rao Sahib Vagholkar —Yes. That is the market price

President —The setts here have been really entered at the market rate?

Rao Sahib Vagholkar —Yes

President —I can't help thinking that there is a flaw in the calculation of your setts at Rs 30 per thousand. How many setts would go to a ton roughly?

Rao Sahib Vagholkar —3 maunds of cane for 1,000 setts, or 9,300 setts to a ton

President —If we take the Belapur costs of plant cane at Rs 16 8 0 a ton roughly, on your figures that would work out to under Rs 2 as the cost of a sett. You don't buy your setts, do you?

Mr. Main —Not except in special circumstances

Dr. Matthai —Really all he has got to do is to take the cost of planting plus profit and so on and charge that for his sett

Mr. Main —This statement does not take profit

President —You may even take profit into account, that would not make much difference

Mr. Main —Take Rs 30 as the actual cost of production and allow Rs 10, that would be Rs 40

President —That would mean a small reduction of Rs 30 in the case of your figures?

Mr. Main —Yes

President —But the main cause of difference in the costs is the manure which in your case comes to Rs 258 against Belapur Rs 197

Rao Sahib Vaghollur —It largely comes under farm yard manure

President —Your farm yard manure is Rs 90 as against their Rs 25-8-0

Rao Sahib Vaghollur —Yes

President —On the other hand your production is 34 tons against their 28 47 per acre

Rao Sahib Vaghollur —Yes

President —What is your experience of manuring? Do you think that these items 7, 8 and 9 could be cut down without affecting the output?

Rao Sahib Vaghollur —Our cost of manuring in the case of the Manji farm comes to about Rs 151, Rs 60 is the cost of manure, cake and other things Rs 80, and application Rs 10

President —On the Manji method this Rs 258 could be reduced to Rs 151?

Rao Sahib Vaghollur —Yes

President —Your method and the Belapur method speaking roughly come to about the same?

Mr. Main —When they found they were putting on enormous quantities of manure they called in outside advice and the first advice was that they must bring down the manure bill

Dr. Matthai —The way in which this reduction is brought about is first by reducing the farmyard manure and then by re-arranging your nitrogenous manure in such a way that you use more of the cheaper kind. Is that the idea?

Rao Sahib Vaghollur —The reduction of F Y M dose from 60 cartloads to 30 cartloads with top dressing dose of cakes and Sulphate of Ammonia was brought about with the object that the F Y M would be scarce and consequently costly. Later on 30 cartloads of F Y M were substituted with San Green Manure with the same point in view. The main point in both the reduction and substitution as well as in supplementing cake partly with Sulphate of Ammonia is the cheapness of Nitrogen and to obtain fairly economic yield with the reduced quantities of Nitrogen

Dr. Matthai —Practically farmyard manure is being replaced by green manure?

Rao Sahib Vaghollur —Yes

Dr. Matthai —How much of this reduction has been due to reduction in the quantity of nitrogenous stuff that you use? If you look at your answer to question 11, you say a part of the reduction which has been brought about in the fertilizer bill is due to fall in prices of fertilizers

Rao Sahib Vaghollur —These are figures of the cultivators. These are changes which have happened to the cultivator

Dr. Matthai —That is to say, if you could restrict your top dressing to 50 per cent nitrogenous manure and replace your farmyard manure by green manure then ultimately you could bring down your cost of manure to a figure of Rs 150 per acre?

Mr. Main —That is so, a little less I believe

President —This rent of land is rather large?

Rao Sahib Vaghollur —That is two years' charge at Rs 30 per acre because the cane remains there for about 15 months

President —Owing to the block system you rent three acres?

Rao Sahib Vaghollur —At Manji we rented at Rs 40, that is, Rs 120 for three acres. We can't debit such high rent against the other crops and the standard method of dealing with it is to take two-thirds

President —So Rs 60 represents two-thirds of the rent of three acres?

Rao Sahib Vaghollkar —Yes

President —That is roughly Rs 30 an acre?

Rao Sahib Vaghollkar —Yes

Mr Patwardhan —In rural areas it drops down to Rs 20, but Rs 30 is about common

President —The rent at Belapur—they have special rates—is Rs 25 an acre but I suppose they got their land undeveloped

Rao Sahib Vaghollkar —Probably

Dr Matthai —Comparing these canal irrigation costs with well irrigation costs if you take the yield in the two cases into account then I suppose well irrigation is likely to be cheaper per unit of *gur*?

Mr Main —25 pallas as well outturn against 35 pallas as canal outturn and the cost is Rs 400 against Rs 600

Rao Sahib Vaghollkar —Rs 16 per palla for well irrigation and Rs 17 for canal irrigation

Dr Matthai —I was taking 27 pallas which is an intermediate figure

Mr Main —It might go down

Dr Matthai —I suppose the right way of looking at it would be to take into account also the cotton crop that you get on the irrigation area

Rao Sahib Vaghollkar —Only in the Godavari and Pravara canals

Dr Matthai —Otherwise if you are able to get 28 pallas on a well irrigated area on these costs there is not very much difference as regards canal irrigation and well irrigation. It is much about the same?

Rao Sahib Vaghollkar —Yes

Dr Matthai —Taking the items of cost under which the difference appears I find manuring on the canal area is Rs 258 against Rs 122 in the well area

Rao Sahib Vaghollkar —Yes

Dr Matthai —But watering is higher on the well irrigated area

Rao Sahib Vaghollkar —Yes, because he has to use his bullocks

Dr Matthai —It is almost Rs 120 against Rs 70

Rao Sahib Vaghollkar —Rs 120 against Rs 50

President —What do you mean by Rs 4 per turn?

Rao Sahib Vaghollkar —Per turn of irrigation

President —I suppose actually the cultivator would continue to grow sugarcane even if the price of *gur* fell very considerably?

Mr Main —Do you mean the well man?

President —Both

Mr Main —The well man is likely to be ousted by the canal man

President —What I mean to say is this if his return were to cover all his expenses except his own labour and the bullocks, he might still continue to grow sugarcane

Mr Main —Yes

Rao Sahib Vaghollkar —He is not required to migrate anywhere. Even if the price of *gur* is very low, he would like to grow cane for some area

Dr Matthai —Simply to pay his own wages?

Rao Sahib Vaghollkar —Yes, and his bullocks which he will have to keep for some time idle. On the well irrigation cane industry is secondary

President —That is to say, he has got to continue his agriculture and his bullocks will continue to work so that even if he stopped growing cane, those expenses would still be there. Even if cane shows no profit, he will continue to grow cane?

Rao Sahib Vaghollkar —Yes

President —Especially as the cultivation of cane gives him a better outturn for the next crop

Mr. Main —But actual experience shows that he is giving up cane

President —What is that due to?

Mr. Main —Presumably as you say the profits have gone down to the margin, and the ryot is taking more to the growing of other crops

President —In well areas?

Mr. Main —Yes

President —On Canal users?

Mr. Main —He would go on cultivating cane until he reaches the point of no profit

President —Not necessarily the point of no profits, but if these costs which you have given here were not completely recovered, he would still go on cultivating cane

Rao Sahib Vaghollari —You mean the man on well irrigation?

President —No, the man on canal irrigation

Rao Sahib Vaghollari —No, he would not. For everything he has to pay cash

President —You don't quite understand the point. Take these costs which you have shown us in answer to question 10. The total cost is Rs 616 4. Of that Rs 66 represent the value of labour put in by the owner of the land and by his bullocks. Supposing the gum which was produced fetched not Rs 616 but Rs 616 minus Rs 66 that is to say, all his expenditure would be covered except his own labour and that of his bullocks. He might still continue to grow sugarcane

Mr. Main —No

President —Putting it a little higher, instead of getting Rs 616 you get Rs 580

Mr. Main —A peasant will work for a lower wage than the business rate because he is his own paymaster

President —That is what I mean. You have taken his wages at Rs 10 a day. He might, rather than give up the sugarcane cultivation which benefits the succeeding crop, be content with much less

Mr. Main —I quite agree with you

President —So that we must not conclude that if his outturn doesn't bring him Rs 616 the area under sugarcane will be going down

Mr. Main —That would not be the point at which cane cultivation would cease

President —Is there any prospect of further economy so far as the cost of cultivation is concerned? I am not referring to this statement here

Mr. Main —You mean taking the Manjhi farm?

President —Yes

Mr. Main —There are two directions in which we may get lower than the Manjhi level. One is a better cane and the second is the lower wage which you just mentioned. All these calculations are made on a fairly high wage level and I think a man would be willing to work on a lower wage than Rs 10

President —As regards better cane, that refers only to the output?

Mr. Main —Yes

President —Or do you mean if you get a better cane you may get a larger output and at the same time owing to the hardy nature of the cane or some reason of that sort, the cost of manuring would fall?

Mr. Main —It might give you either bigger tonnage or cost you less to produce

President —You have no data to go on to estimate the possible fall in the charge for manuring, if improved canes were introduced?

Mr. Main —We are experimenting below 150 lbs of N top dressing standard with J 213

President —What conclusions have you arrived at?

Rao Sahib Vagholkar —We are just trying it only from this year.

President —Have you any information as to the cost of manuring cane in other countries?

Rao Sahib Vagholkar —It might be available in reference books.

President —You have no personal information?

Rao Sahib Vagholkar —No.

President —This farmyard manure is not indispensable for the cultivation of cane? Green manures can take its place?

Mr. Main —To some extent cane can take its place as shown at Belapur.

Dr. Matthai —As a matter of fact beyond the level which has now been reached by the Munji costs, if you want any substantial reduction you have got to concentrate on the type of cane. That is the big thing?

Mr. Main —Yes.

Dr. Matthai —On this method I suppose the Revenue Department is responsible for the area under the crop and for the condition of the crop. The Agricultural Department is responsible for the crop cutting experiments and the standard output.

Mr. Main —Our work is propaganda. We have no power over the cultivators. We carry all these improvements to him in the form of propaganda.

Dr. Matthai —I am on a different question. I am on No. 10 (b), your description of the methods of collecting the data. We are on the statistics of production. As far as the data for these statements are concerned, your department is responsible only for No. (2), the standard normal output of the crops per acre of land. The others are data that you get from the Revenue Department?

Mr. Main —Item Nos. (1) and (d) the area under the crop and the annual valuation of the crop are reported by the primary reporting officers who are under the Revenue Department.

Dr. Matthai —It is only for determining what the normal yield on a normal kind of land in a normal year is that you are responsible?

Mr. Main —The Director of Agriculture is responsible.

Dr. Matthai —I don't know if you would care to answer this—how far have the data that you have got in regard to area under crop and the condition of the crop been more or less satisfactory figures?

Mr. Main —Do you mean the annual valuation? Of course the general tendency is to underestimate. They will say As 9 when it is probably As 11.

President —The general tendency of the Revenue Department is to over-estimate.

Mr. Main —If you look at these figures you will find scarcely a year in which a crop is 100.

President —According to your notation 75 is normal.

Mr. Main —100 is normal.

President —You said As 12 crop was normal.

Mr. Main —Yes. This 100 was taken at As 12 crop.

Dr. Matthai —When you have got your acreage under cane and the condition of the crop, then in order to get your yield of *gur*, what kind of proportion do you apply? What is the proportion of *gur* to cane you apply in order to get that? I imagine that the primary officer sends up data to you regarding the cane yield in the year in the area that he is responsible for. From that point to get the *gur* yield you work on some formula. I expect.

Mr. Main —Yes, our proportion of *gur* to cane is 1 : 8.

Dr. Matthai —Is that proportion applied invariably from year to year?

Mr. Main —We don't alter it for statistical purposes.

Dr. Matthai —What is the history of this proposition? From our point of view it is important to make sure of the accuracy of the figures of *gur* yield. Now part of the cane is used for chewing and part would be used for sets for planting purposes. I have seen an estimate that it might be as much as 17 to 20 per cent of the total cane yield. If no allowance is made for that, then the *gur* yield has been considerably overestimated.

Mr. Main —*Gur* would be overestimated on that basis.

Dr. Matthai —Is no allowance made for that in fixing this proposition of 18?

Mr. Main —As far as I am aware there is no allowance for that factor.

President —I see here one reply given by the Department of Agriculture and the other by the Department of Irrigation Development and Research. Is there a special department in Bombay?

Mr. Main —The Irrigation Department consists of two branches, what they call the ordinary branch and the special branch and that has grown out of a small development which began some years ago when the question of disposing of Poona effluent arose. Originally they had an effluent farm which was managed by the Professor of Agriculture at the College and owing to his duties being very numerous he found that it was impossible to look after it. The question then arose who was going to do it and as it was largely connected with irrigation also it was finally decided that the Executive Engineer who is controlling the local irrigation should run the effluent farm and that was the origin of the Irrigation Department turning its attention to Agriculture. It soon proceeded beyond effluent and took up other problems such as water requirements, etc., and more or less built up an experimental station near Poona which is called the effluent farm.

President —This is a special branch of the Irrigation Department which is also in charge of Agricultural Development and Agricultural Research, is that right?

Mr. Main —It has never been definitely said that that department is in charge of agricultural development. That word "Development" is not qualified by "Agriculture."

President —Shall we take it that the special department is in charge of the whole department of research, both industrial, agricultural of the whole of the Presidency?

Mr. Main —The word development is presumably intended to mean the development of design.

President —Irrigation Development?

Mr. Main —Yes, improved method of designing canals and that sort of thing.

President —At present this special department in a sense overlaps the activities of the Irrigation Department on the one hand and the Agricultural Department on the other.

Mr. Main —The Agricultural Department, I should think.

President —The Agricultural Department on the one hand and the Industries Department on the other.

Mr. Main —The proper Irrigation Department on the one hand and the Agricultural Department on the other.

President —How about the Industries Department?

Mr. Main —That doesn't come in at all.

President —That is also connected with development?

Mr. Main —It is a very small department.

President —This Department overlaps the Irrigation Department on the one hand and the Agricultural Department on the other.

Mr. Main —Yes.

President —Is its personnel entirely Irrigation?

Mr. Main —Yes, as regards the officers. But they have recruited a number of agricultural graduates who fill subordinate positions. For instance, the man who runs the effluent farm is an agricultural graduate.

President —It is a liaison department between the Irrigation and the Agricultural Departments. Is that the purpose?

Mr. Main —I do not know whether one could so describe it. It is a more or less self contained department for running the effluent farm and for making certain investigations.

President —This is the Department which gives the reply to the Questionnaire as to the causes of variation in the sugarcane area?

Mr. Main —Yes, practically all problems connected with the actual higher administration of the canals are referred to that Department. In particular it deals with the classification of soils with reference to their suitability for cane and various kinds of irrigation. Sugarcane is not allowed to be grown anywhere, and it is necessary to decide where. And they have prepared rough classification maps.

Dr. Matthan —On that type of question which is to a very large extent also agricultural, they get technical advice from the agricultural subordinates of the Department.

Mr. Main —You mean on the classification of the soil?

Dr. Matthan —For instance, on such questions as manuring, etc.?

Mr. Main —I cannot say that they consult us on soil classification. But they consider their staff competent to deal with such problems within the limits of their investigation.

President —There are certain statements made as regards the area under sugarcane in the Bombay Presidency, by this Special Department which require a little consideration. They are statements of a general kind on which we would like your opinion. The first statement is that the dominant factor in the area under sugarcane is the price of gur. The second statement is that the consumption of gur is influenced by the variations in the price of imported sugar and the third statement—for which I have not been able to find any evidence in the answers—is that the supply of gur has already overtaken the demand in the Bombay Presidency. Taking the first statement, would you consider that the area under sugarcane depends entirely on the rate of gur?

Mr. Main —That is one of the factors, I should put it rather as a general statement and say that it is one of the factors.

President —Would you consider it as a dominant factor?

Mr. Main —No not when other factors are unfavourable.

President —In Madras we were told that the area under gur depended upon the supply of irrigation.

Mr. Main —I was going to say that the supply of irrigation is a very large factor.

President —On the climatic conditions of the area also?

Mr. Main —Yes.

President —And on the question of rotation of crops?

Mr. Main —Yes, but if the price goes down to a very low level as it did three years ago down to Rs. 20 there would be a definite contraction in response to that.

President —Would it be more correct to say that extreme variations in price have a marked effect on the area?

Mr. Main —Yes, that is the way to put it.

President —But that minor variations in price are probably insufficient to affect the area?

Mr. Main —Quite so.

Dr. Matthan —In any case the variations in price are affected by water supply and factors of that kind?

Mr. Main —Yes. For instance, we sell our *gur* in Khandesh which is a large cotton area. The cotton growers up there are good consumers of *gur*. In a bad year the demand shrinks, and that is a factor with us.

President —Looking into the graphs with which you have supplied us, your acreage for the whole of the Bombay Presidency was 68,000 in 1920-21.

Mr. Main —Yes.

President —In 1920-30, it was 66,000 acres. During all these years except in 1923-24 it had remained fairly steady.

Mr. Main —Yes.

President —In that period there have been tremendous variations in price. Starting in 1918 at somewhere below Rs. 24 a panna it fell down to about Rs. 15 or 16 in the middle of 1918 and then it rose steadily up with seasonal variations until in 1920 there was a jump up to about Rs. 36 per panna.

Mr. Main —These are the retail figures. I don't think I have prepared the graph.

Rao Sahib Vagholkar —That is Special Investigation Department's graph.

President —Perhaps, you would like to have a look at it (shown).

Mr. Main —It (the peak price) was only for a short time.

President —Why did it last for such a short time?

Mr. Main —I do not know why.

President —We can ignore this particular high point of Rs. 36 because as my colleague was just reminding me probably the very high point resulted in a sharp decline of the demand and the price fell at once. Ignoring this particular rise there has been a steady rise since 1918 and I do not know whether you have figures showing the acreage before 1920.

Mr. Main —I don't think we have them here.

President —You see this graph does not show any real correspondence between price and the total acreage.

Mr. Main —No.

President —If you take 1920—that is the year of big price—you will find that the acreage is 66,000 and next year you have a small fall. In 1921-22 the figure is still very high. In the next year that is in 1922 the price is still higher and you find that the figure goes back from 57,000 to 63,000, in 1923 although there has been a fall in the price of *gur*, the acreage goes up to 73,000.

Mr. Main —That is a fairly big increase.

President —In 1924 there is a fall followed by a considerable rise. The figures are 62,000 and so on. The figures remain fairly constant.

Mr. Main —It is a fluctuation rather than a definite change.

President —At present in 1929-30 when the price of *gur* has fallen to approximately the 1918-19 level the figure is 66,000.

Mr. Main —Yes.

President —So that there is nothing in the graph to indicate that the dominant factor in the acreage is the price of *gur*.

Mr. Main —No.

President —What these figures do indicate is that the acreage in the irrigated area has gone up and the acreage elsewhere has gone down in the last ten years.

Mr. Main —Yes.

President —What about the Bombay Presidency proper? Does that include any irrigated areas?

Mr. Main —That includes the whole of the Bombay Presidency excluding Sind.

President —So that the decrease has been in Sind?

Mr. Main —Yes, and in Konkhan

President —In Guzerat too there has been a decrease?

Mr. Main —Yes

President —As a matter of fact in these areas sugarcane has never been on a large scale?

Mr. Main —No

President —Even there the reduction is not a reduction which is necessarily caused by price. So that it is a statement which cannot be accepted

Mr. Main —Your interpretation of it is more accurate. It is only when the price goes below a certain point there is a big response

President —Then, the statement that the consumption of *gur* is influenced by variations in the price of imported sugar. That may be true of the towns but so far as we have been able to ascertain it is not quite a correct statement of the case so far as villages are concerned. Could you give us any information on that?

Mr. Main —I saw a graph recently prepared by the Imperial Council of Agricultural Research which shows that there is a general agreement between the *gur* prices and sugar prices

Dr. Matthai —That graph I believe was based on the price of sugar in Bombay and the price of *gur* in Poona. I rather think that that graph justifies the conclusion that as far as cities like Bombay and Poona are concerned there is correspondence between the *gur* and sugar prices, but from the graph which our Society has prepared for Satara (shown) you will see that we are not able to establish any kind of correspondence

President —Some kind of correspondence between *gur* and sugar prices but not an exact correspondence. The graph indicates that with a rise in the price of sugar there is a tendency in the price of *gur* also to rise but not necessarily to the same extent. In the graph which we obtained for retail sales of Madras from the Co-operative Credit Societies, we see the same tendency but as far as smaller towns and villages are concerned we are not able to verify the statement

Mr. Main —I think that though they generally follow each other, there is a certain amount of independence where the variations in price are small

Dr. Matthai —That is quite true. Where you have small changes apparently the two things remain independent of each other

Mr. Main —Yes, within small limits

President —As regards the big rise in the price of sugar such as that which occurred in 1921. I think that if you compared the price of groundnuts in that year you will find a corresponding rise

Mr. Main —Very likely

Dr. Matthai —The Madras graph (shown) shows a much more exact correspondence

Mr. Main —It is extraordinary

Dr. Matthai —The Imperial Council's graph is like that

President —Allowing for the general rise in price in 1920-21 there is not a great deal of correspondence between *gur* and sugar prices

Mr. Main —Mr. Huston who has examined the Deccan Canal problem says that there is an almost exact conformity between these two prices down to the year 1924 and beginning with 1925 each has varied independently, unaffected by the other

President —What is the area he is speaking of?

Mr. Main —He is speaking particularly of the Deccan canal area

President —All the dealers have told us that there is no correspondence between the price of imported sugar and the price of *gur*. Your price of *gur* is higher than the price of sugar

Mr. Main —Did the dealers maintain that even when there was a big slump in the one there was no corresponding fall in the other?

President —That general statement is that the price of *gur* is dependent on the crop of the year.

Mr. Main —As far as Bombay is concerned this big slump in the price of sugar for the past 18 months is to some extent counteracted by the fact that 1928-29 was a very bad year for sugarcane in the Deccan area and so also there was a considerable reduction in the supply of *gur* at that time.

Mr. Patwardhan —Yes. We have not got village records of prices.

President —It is almost impossible to obtain prices in the villages as there are no records of prices there at all. All these figures which are given in the provincial gazettes are the result of tahsildars' enquiries from headquarters.

Rao Sahib Inghollari —That is so.

President —As regards villages we can only rely on the statement of the cultivators and *gur* dealers and so on. When we were in Coimbatore we were told that, generally speaking, when the price of white sugar in the towns where imported sugar is consumed largely varied considerably it had an effect on the price of *gur* there but the proportion of *gur* consumed in the towns as compared with that consumed in the country was so small that the corresponding influence on the price of *gur* in the country was practically nil. That was the general idea and as far as I can see there is no evidence against that statement.

Mr. Main —Yes. But this all refers to the price of white sugar. Does it not? The brown sugar is also a danger to *gur*.

Dr. Matthai —That I suppose follows the course of the price of white sugar?

Mr. Main —Yes.

President —Your view is that the price of imported sugar has some effect on the price of *gur*?

Mr. Main —Yes, when the margins are wide.

President —What evidence is there for the statement that the supply of *gur* has overtaken the demand?

Mr. Main —I think what the writer means is that since the Deccan cane area reached the figure of 35,000 acres prices have gone down to about Rs. 20 a pilla and I think what he means is that the drop in the price there was due to the market being glutted.

President —He said before that the drop in the price of *gur* was due to the drop in the price of imported sugar. There are certain figures which have been supplied to us with regard to railborne traffic which support the idea that Bombay is not self-supporting.

Mr. Main —The figures in my written evidence are rather inconsistent with my remarks here that Bombay is self-supporting. Those figures are ten years old. One of the sources from which sugar was imported 10 years ago was Madras. I understand those imports have been stopped.

Dr. Matthai —Coimbatore is still sending *gur* to Bombay.

Mr. Main —Another factor is that much of the imports into the Bombay Presidency go into the Kathiawar Peninsula. I am not quite sure if it is consumed there, but I think it is.

Dr. Matthai —In 1921-22 the imports into Bombay amounted to 11 lakhs of maunds and the exports in the same year amounted to 8 lakhs maunds, leaving a balance of 3 lakhs maunds. At 3 maunds an acre of *gur* you need 280,000 acres under cane to wipe out that import. You have increased the acreage by about 3,000 according to your statement, there is still room so far as I can see provided prices are reasonable. Any reduction in the price of *gur* would result in the onsting of a considerable amount of *gur* imported from elsewhere.

Mr. Main —Most of the *gur* comes from the United Provinces which is a lower grade article and which might not be replaced by Deccan *gur*.

Dr. Matthai—What is the suggestion Mr. Main, that this net import of 8 lakhs mounds is really meant for consumption elsewhere?

Mr. Main—It is meant for consumption in Kathiawar which, although inside the Bombay Presidency consists of a group of Indian States.

Dr. Matthai—Outside the British area?

Mr. Main—Yes.

Dr. Matthai—And that is a quality which is not generally produced in the Deccan area?

Mr. Main—That is my point.

President—Would you go so far as to say that no further increase in the area under cane on the canal is possible?

Mr. Main—We think any expansion means sugar or a very big reduction in price opening up wider consumption of gur. Many people who consume gur purchase it to a very small extent.

Dr. Matthai—What is the general average in Bombay?

Mr. Main—It is very difficult to calculate.

Dr. Matthai—The general Indian average is over 20 lbs. per head.

Mr. Main—Including gur and sugar?

Dr. Matthai—Yes.

President—Is the consumption of gur fairly constant? You were saying that it is used on festival days.

Rao Sahib Tagholkar—It depends on the purchasing power. For instance in Khindesh and Berar cotton is the chief cash crop and if they get a fair price for cotton the consumption of gur is greater and if the prices are low the consumption of gur is also less.

Dr. Matthai—So that I suppose practically it comes to this that unless you can reduce the price of gur you cannot expect a considerable increase in the demand?

Rao Sahib Tagholkar—That is so.

Mr. Main—We are very much afraid that the market for gur may contract owing to the possibilities of the lower grade Java brown sugar.

President—We enquired from importers about this Java gur and we were told that it is not manufactured by the Dutch factories. It is purchased from the small farmers who make it, the product is not so pure as Indian gur, and Messrs. Ralli Brothers who imported a small consignment found that it was very difficult to sell it here.

Mr. Main—I think Java brown may be taken up by refineries—that is where the threat lies to our gur. If the refineries import large quantities of Java brown then demand for Indian gur will contract and this will react on the price of Indian gur.

Dr. Matthai—Is there very much gur used for refinery purposes?

Mr. Main—I understand there are 14 refineries in Northern India and a good deal of gur produced there, is refined.

President—Your idea is that Java brown might be imported?

Mr. Main—I think it may come in and oust the Northern India gur and naturally this will react unfavourably on the Deccan gur industry probably leading to a reduction of cane area.

President—They are using brown sugar for adulterating gur?

Mr. Main—That is also a considerable danger to Indian gur.

Dr. Matthai—If you mix local gur with Java brown you can produce an article which will be accepted by the market as gur.

Mr. Main—Exactly, that is being done and there lies the danger.

Dr. Matthai—We will take question 22 (b). All these 4 kinds of gur are edible gur, or are some of them used entirely for refining purposes?

Rao Sahib Vaghollur—All these three qualities are meant for eating purposes

Dr Matthai—No 4, what exactly is it?

Rao Sahib Vaghollur—That is a syrup of juice of a particular consistency

Mr Main—Not for distilling purposes

Dr Matthai—Is it more or less like molasses in appearance?

Mr Main—Yes, but it contains a greater amount of sugar

Dr Matthai—What is it used for?

Mr Patwardhan—For eating with other things

Dr Matthai—Is it used for sweetmeats?

Mr Patwardhan—It is used as it is, with bread

Dr Matthai—As a sort of jam?

Mr Patwardhan—Yes

Dr Matthai—All these four kinds are for edible purposes

President—23 (1) What is the output of these two mills? You say 7,000 lbs of gur per acre. What is the output for the season?

Mr Main—Shall we take the unit by the hour?

President—Yes

Mr Main—Our power mill at Manji farm works up from 2½ to 3 tons per hour. Then the next power mill 92 gives roughly half of that (1½ tons) and then the next smaller one 45 gives half of that (¾th ton) and the bullock mill gives upwards of ¾th of a ton per hour

President—This small power mill for which you have given the cost, is that about double?

Mr Main—Yes. This is the small one. Another one between it and the one that we use at Manji gives again double

President—Which power mill would be used by the cultivators?

Rao Sahib Vaghollur—Nos 92 and 45, those are the two popular types and the rest of different types

President—Which power mills shall we take for purposes of comparison?

Mr Main—92. That is comparatively a good one. But this figure here I believe is 45

Dr Matthai—Is that the common type?

Rao Sahib Vaghollur—Yes

Mr Main—It depends upon a man's holding, how much cane he has, whether he should adopt 92 or 45

President—As compared with the bullock mill how much would this 45 power mill be able to crush in the season?

Mr Main—Double

Dr Matthai—That is about ¾th?

Mr Main—Yes

Dr Matthai—I suppose the difference in the output has been allowed for. If you work on a bullock mill, it costs you Rs 138 to make 7,000 lbs of gur? If you use a 45 power mill it costs you Rs 122 to make the same amount of gur?

Mr Main—Yes

Dr Matthai—Therefore the reduction in the costs that you get by using power mill is about Rs 10 per 30 pallas which works out to approximately As 2 a Bengal maund?

Rao Sahib Vaghollur—Yes

Dr Matthai—That is not sufficiently attractive to encourage the use of this power mill

Mr Patwardhan—It saves time. You can have a greater quantity of cane crushed compared with the bullock power mill

Dr. Matthai—If you take the kind of average holding that a small cultivator has, will it be any advantage to him to have a power mill which crushes very much more?

Rao Sahib Vaghollkar—There are two or three factors. When they use a power mill work is done rapidly and they can send their *gur* to the market earlier. Then the second point is if we compare the extraction with the bullock mill, that is the *Bani* mill which is very common, the extraction percentage is higher by 3 per cent. Naturally it gives about 3 pallas of *gur* per acre more.

President—Is that taken account of in these costs?

Rao Sahib Vaghollkar—This is the working cost. It is not taken into account in these costs.

Dr. Matthai—Are these costs on a *gur* basis or on a time basis?

Rao Sahib Vaghollkar—They are on a *gur* basis.

Dr. Matthai—In that case it must cost you Rs. 122 to make 7,000 lbs. of *gur* on a power mill.

Rao Sahib Vaghollkar—Yes.

Dr. Matthai—Therefore that takes into account the extraction element.

Rao Sahib Vaghollkar—No, we have not taken that into account.

President—I wonder if you can draw up these statements not on the basis of lbs. per acre, but of sugarcane crushed?

Mr. Main—Yes.

President—State the cost of crushing 100 tons of cane in a bullock mill and a power mill and also the cost of making 100 tons of *gur* in the case of a bullock mill and power mill.

Mr. Main—I think we had better send that in to you.

President—If you would send that, it will be useful.

Mr. Main—You require it on the basis of a given quantity of cane?

President—Yes.

Dr. Matthai—It will probably be better if you take the quantity of cane appropriate to an acre, you have given us the costs of cultivation per acre. In order to get the *gur* costs, it is better to take the quantity of cane that you get out of an acre, say 85 tons.

Mr. Main—Yes.

President—What is included under the term 'hire for equipment' in the bullock mill?

Rao Sahib Vaghollkar—That is the crusher, pans and other accessories which are hired.

President—It doesn't include bullocks?

Rao Sahib Vaghollkar—No.

President—What is the equivalent of that in the power mill?

Rao Sahib Vaghollkar—There also we have included the hire charges of the pans and also the depreciation and other costs of the power mill which are equivalent to the hire in the bullock mill.

President—That is to say depreciation charges on the power mill. That of course will be dependent on the output of the mill during the season.

Rao Sahib Vaghollkar—Yes.

President—What is the output of one of the small power mills? What could it deal with in a season?

Mr. Main—We took it on the basis of 120 working days.

President—Take 120 days. How much cane could it crush?

Mr. Main—At the rate of $\frac{1}{4}$ tons per hour, and 10 hours it comes to $7\frac{1}{2}$ tons per day.

Rao Sahib Vaghollkar—200 tons per season.

President—How much could the bullock mill crush at the same time?

Mr. Mann—We are taking about half as a rough calculation

Dr. Matthai—In that case taking the capacity of this class of power mill to be double that of a bullock mill, it practically comes to this that the difference in cost per maund instead of As 2 will be As 4

Rao Sahib Vagholkar—You mean the difference in costs?

Dr. Matthai—Yes, the power mill cost per maund of finished gur would be As 4, if it is double that of the bullock mill

Rao Sahib Vagholkar—We will have to calculate

President—The bullock mill works out at about Rs 180 a maund

Rao Sahib Vagholkar—Yes

President—It is rather high, because the cultivators who appeared before us at Poona gave the rate per palla of 250 lbs on a bullock mill as Rs 8-4 0 That comes to Rs 110 per maund

Rao Sahib Vagholkar—Yes

President—So that your costs appear to be high. On what are they based? Here are the costs given by them (handed in)

Mr. Mann—They are stating at the stripped cone stage

Rao Sahib Vagholkar—They have not included the harvesting operations

Dr. Matthai—I think they have included the harvesting charges in the cost of cultivation

President—After all harvesting is really a proper charge to cultivation

Rao Sahib Vagholkar—It comes to As 0 a maund or Rs 20

President—That is for how much?

Rao Sahib Vagholkar—7,000 lbs

President—Roughly 90 maunds

Rao Sahib Vagholkar—Yes

President—It comes to nearly As 5

Rao Sahib Vagholkar—Yes

President—That leaves you about As 2 a maund

Rao Sahib Vagholkar—It will come to Rs 4 12 0 per palla of 250 lbs

Dr. Matthai—To that if you add the cost of cultivation Rs 616, it comes to Rs 620. The total cost of gur would be somewhere about Rs 25 a palla

Rao Sahib Vagholkar—We have taken the yield at 35 pallas. Rs 17 plus Rs 112 0

President—It does seem to me that comparison between the bullock mill and power mill and the hire for equipment needs some explanation. The capital cost of a bullock mill is about Rs 450 and the capital cost of a power mill is something like Rs 7,500

Mr. Patwardhan—This is another mill No 92. This No 45 is the common smallest mill

President—What is the cost of a small power mill?

Mr. Patwardhan—Rs 8,000

President—It is nearly 8 times as expensive as a bullock mill

Rao Sahib Vagholkar—Yes

President—Let us take roughly Rs 450 in the one case and Rs 8,000 in the other

Rao Sahib Vagholkar—Yes

President—What shall we take depreciation at?

Rao Sahib Vagholkar—Take it on the basis of 15 years life

President—Shall we take 6½ per cent, that is 1/16th?

Rao Sahib Vagholkar—Yes

President—It will be Rs 28 in one case and Rs 188 in the other. What we have got to do is to spread that over. In a season a bullock mill can do 150 tons.

Rao Sahib Vagholkar—Yes.

President—150 tons of cane produce how much gur?

Rao Sahib Vagholkar—The gur yield is 8 per cent.

President—Rs 28 have to be spread over 36 tons of gur.

Rao Sahib Vagholkar—Yes.

President—That is equal to 7/9th of a rupee, say between 11 and 12 annas a ton.

Rao Sahib Vagholkar—Yes, about 12 annas.

President—In the case of a power crusher, you have Rs 188 spread over 72 tons. That comes to Rs 2.6 or Rs 2.9 a ton.

Rao Sahib Vagholkar—Yes.

President—You have given this for 7,000 lbs of gur. That would be in tons roughly how much?

Rao Sahib Vagholkar—3 1/5 tons.

President—What are the other charges besides depreciation in the hire for equipment?

Mr. Main—Metal pans.

President—You say that the capital cost of such a furnace and accessories, etc., is Rs 150. That includes I take it pans.

Rao Sahib Vagholkar—In the power crusher there is no pan.

President—I am talking of the bullock mill at present. That must include pans.

Rao Sahib Vagholkar—Yes.

President—The depreciation comes to Rs 280.

Mr. Main—It is rather difficult to make the comparison.

President—Let us get the actual facts. Is this power mill hired or not?

Mr. Patwardhan—In some cases it is being hired.

Mr. Main—It is not prepared on a hire basis.

President—It is hired including the engine, pans and everything?

Mr. Main—Yes.

President—What is the normal charge for hiring out?

Mr. Main—For the power mill it varies from Rs 5 to Rs 6 a day.

President—How many days would you require?

Rao Sahib Vagholkar—Four to five days.

President—In the case of a bullock mill?

Rao Sahib Vagholkar—Rs 2 a day.

President—How many days?

Rao Sahib Vagholkar—9 to 10 days.

President—But a bigger cultivator would purchase it?

Rao Sahib Vagholkar—Yes.

President—How many power crushers are working?

Rao Sahib Vagholkar—78.

President—How many are owned by cultivators?

Rao Sahib Vagholkar—All are owned by cultivators.

President—The majority of the cultivators have their own crushers?

Rao Sahib Vagholkar—Yes.

President—So that we ought to assume that the cultivators have purchased and we have to calculate depreciation?

Rao Sahib Vagholkar—Yes.

Mr. Patwardhan — That has been taken into account in the case of the 92 mills

President — So that actually the cost of the crusher would be considerably less than the amount shown here?

Mr. Patwardhan — Yes

President — As regards this furnace and accessories hiring, the system of hiring out is rather curious because a furnace is not a thing you can carry

Mr. Patwardhan — Pans can be easily carried

President — I am talking of a furnace

Rao Sahib Yaghollari — That has to be constructed

President — And then the pans are hired. Do you mean to say that he has to pay Rs. 20?

Mr. Patwardhan — Rs. 2 a day, for two pans two tanks, one mill and other accessories

President — Still I don't understand I am afraid, because he also uses the pans when he uses the power crusher

Mr. Patwardhan — He does

President — Then he must be charged Rs. 2 a day

Mr. Patwardhan — He must be charged Rs. 1 a day because it is worked off in fewer days

President — Would you send us those figures we wanted?

Mr. Main — Yes

Dr. Matthai — The *gur* prices that you have given in reply to question 20, are they wholesale prices or retail prices?

Rao Sahib Yaghollari — These are *bazar* prices (Retail)

President — Speaking generally, prices have been constant since 1927?

Mr. Main — That is so (Handed in a list of prices)

President — These are wholesale prices?

Mr. Main — Yes

President — The average wholesale rate in 1921 April is Rs. 22

Mr. Main — Is that at some big centre?

President — Yes. In 1930 it seems to be Rs. 23. The retail prices of *gur* as given here are Rs. 11 1-0 at Poona in 1921 and Rs. 10 8 0 at Poona in 1929

Mr. Main — Yes. The price in 1927 was the lowest in the list. In 1928 there was a slight recovery and in 1929 there was a marked recovery

President — How are these retail prices drawn up?

Mr. Main — They are reported from those areas and are consolidated in my office. They are consolidated for one year

Dr. Matthai — How is the average arrived at? Do you simply take the average prices of the weekly rates and then make an arithmetical average?

Mr. Main — Yes, that is how it is done

Dr. Matthai — That might be misleading

President — Supposing there is a big jump?

Mr. Main — You would not be able to take out the extremes

President — In 1923 when the price of sugar was very high indeed, the price of *gur* was practically the same as it is now

Mr. Main — Yes

Dr. Matthai — I suppose the relative failure of supply in 1928-29 might account for it

President — The failure occurred early in 1929

Mr. Main — It affected the 1929 figures (see April—May 1929)

President — It would not affect the 1928 figures?

Mr. Main — No

President—Would you attribute the rise in the price in 1928-29 to the frost of that year?

Mr. Main—To the contraction in the yield of *gur*

President—And the import of *gur* from other provinces was not sufficient to counterbalance?

Mr. Main—No. I do not know whether it was exactly a substitute

President—You say the principal causes of variation in prices appear to be the relative price of cotton which affects the purchasing power in Berar and the Nizam's Dominions?

Mr. Main—Those are our best markets

Dr. Matthai—Personally I think your answer to these two questions is a correct statement of the position, that is to say, the price fetched by the cotton crop and the condition of water supply are probably the most important causes of variation in price

Mr. Main—That is my opinion

President—Cotton prices have to a certain extent been going down so that you might attribute the decline in the price of *gur* first to the competition of foreign sugar and secondly to this ground

Mr. Main—The fall in the price of cotton has an effect on the price of *gur* quite apart from the competition of sugar

President—In 1920 there is a big jump, I don't know if the price of cotton was very high in 1920

Mr. Main—It would be, it was just after the war

President—Would it be too much trouble for you to draw up a small graph showing the movement of cotton and *gur* prices? If we find that the correspondence between cotton prices and *gur* prices is shown as very much the same as the correspondence between sugar prices and *gur* prices, it throws light on the subject. The Irrigation and Development Department considers the whole question may be summarized by the statement that supply has overtaken demand

Mr. Main—That more or less agrees with the idea that the demand from the cotton area is an important factor

President—I suppose it is another way of stating, when you say the supply has overtaken demand, that the prices are low?

Dr. Matthai—Supply and demand have no meaning apart from prices

Mr. Main—No

President—We also want to know the reasons why the demand has fallen and why supply has increased. Is a matter of fact has the supply of *gur* increased?

Mr. Main—If you take production figures over a long period, we are producing more *gur* than we formerly did before these new canals have come into existence

President—Talking of your area under sugarcane it has only increased by about 8,000 acres since 1920

Mr. Main—It has been balanced by a drop in the area in other places. There is no reason to suppose that there is any considerable increase in the production of *gur*

President—And yet in 1920 the production of *gur* was not nearly sufficient to supply your Presidency because the railway statistics show that a very large amount of *gur* was imported

Mr. Main—That is so

President—So far as this statement of the Department of Irrigation is concerned we have no evidence to show that the supply has increased and the question now is whether the demand has fallen

Mr. Main—It might interest you to know that this question of economics of *gur* has been receiving a good deal of consideration for two or three years

past. We have had in our budget a provision for the appointment of an enquiry committee but unfortunately that has been cut out for want of funds. But I understand the Imperial Council of Agricultural Research are going to appoint a committee to investigate the economics of *gur* and they will be able to throw a lot of light on it. We think the *gur* market is glutted but at present we can't prove it conclusively.

President—If the figures as they are at present appear to indicate that the supply has not increased to a considerable extent over the whole Province one would say *prima facie* that the demand has not decreased because the price has decreased. That should increase the demand unless of course you presume that imported sugar has very largely replaced *gur*.

Mr. Main—Did you see those figures in which we gave the results of an enquiry made in a few rural areas and villages of the amount of consumption of sugar and *gur*?

President—We wrote to the Bombay Government to ask the Collectors of three typical districts to have figures collected for us.

Mr. Main—This is not in reply to that but independent. This is what the officer did. He enquired into the extent to which sugar is consumed in a part of the rural portions of the district and what proportion that bears to the consumption of *gur*. The figures were collected from nine villages in the Poona District varying in distance from 9 to 35 miles from Poona. The population of one village is 529, the other villages have a population varying from 750 to 2,170. The total population of these villages comes to eleven thousand odd. The annual consumption of *gur* is 65,100 lbs. or 56 lbs. per head while the consumption of sugar is 67,010 or 64 lbs. per head and the proportion of *gur* to sugar is as 1 : 1.14.

President—Could you get a copy of the report for us?

Mr. Main—Certainly.

Dr. Matthai—May I have the Poona City figure?

Mr. Main—The officer has divided the population into four groups, Group A in whose families *gur* has to a great extent been replaced by sugar, Group B in whose families *gur* is not displaced by sugar but tea is consumed very liberally, Group C in whose families *gur* is not displaced by sugar and tea is not taken liberally. Group D in whose families tea is taken moderately.

	<i>Gur</i>	Sugar
Group A well-to-do ones	56	45.8
Group B	16.7	57.1
Group C	18.8	48.5
Group D	19.8	80.6

So that you will find that they take much more sugar in the city.

President—Still they take a very considerable amount of *gur* in the country?

Mr. Main—Yes.

Dr. Matthai—Sugar is 3 to 4 times the quantity of *gur* in the City?

Mr. Main—I should think about that.

Dr. Matthai—And in the other case it is in equal proportion?

Mr. Main—Yes, 1 : 1.

Dr. Matthai—Who is this officer who conducted this enquiry?

Mr. Main—R. B. Sahasrabudhe. He is an agricultural officer.

Mr. Main—Apparently they are taking sugar now, so that we have

President—Then there would be a possibility of shifting from *gur* to sugar? to be rather on our guard in expressing an opinion on this point.

President—Would it be correct to regard the Indian States in the Bombay Presidency as supplying the same markets as are supplied by the Bombay Presidency? We obtained from the Imperial Council of Agricultural Research figures of output of *gur* for Bombay and that includes the Indian States.

Mr. Main — That adds about a third more, 60 becomes 80

President — My colleague has pointed out that if you take the Indian States there has been a considerable increase in output in the last 10 years in *gur* and this increase in output would be sufficient not only to cover the imports of *gur* but leave a balance over. Possibly that might have brought about an increase in the production.

Mr. Main — Is it increased area or increased yield of *gur*?

Dr. Matthai — 294,000 tons in 1927-28. If you take 1919-20 it is 188,000 so that from 1920 to 1927-28 there is an increase approximately of 100,000 tons and then if the figures of 1928-29 are any indication there is a drop since then.

Mr. Main — My figures indicate this, the total production in Bombay Indian State in 1929-30 is 58,000 tons and in the previous year 63,000 tons and the average of the previous five years was 52,000 and the average for the previous 10 years 59,000 tons so that my figures indicate that there has not been a large expansion.

Dr. Matthai — Have you got the States figure for 1927-28?

Mr. Main — No.

President — These are figures of production of *gur*?

Mr. Main — Yes.

President — Is the production of *gur* per ton of cane as high in the Indian States as in Bombay proper?

Rao Sahib Vaghalkar — I think it would be the same in Kolhapur.

Mr. Main — It is mostly well irrigation so it would be higher.

Dr. Matthai — What about Baroda? I find these figures include Baroda has Baroda a fairly large yield?

Mr. Main — It is not a very important cane growing area. It is not considered sufficiently important. The areas in the States show considerable stagnation. For instance last year the total of the Indian States was 25,800, the previous year it was 24,800, the average of the five years is 25,500 and the average for the previous 10 years is 25,700. There is very little change.

President — What is your output now of *gur* in Bombay?

Mr. Main — I will give you the exact figures. Last year's output including States was 225,073.

President — You say in answer to question 29 that some years ago the estimate made by the Director of Agriculture of the consumption in Bombay was 18 to 19 lakhs of Bengal maunds, so that for Bombay proper or Bombay including Kolhapur and other States.

Mr. Main — I believe Dr. Mann was thinking of the Decan. That was the portion apparently that was not exported from the Decan, at least not exported outside the Bombay Presidency. He gave a parallel figure along with that which was 18 lakhs which was exported.

President — That might be quite a misleading figure as to the consumption because there are imports into Bombay as well as home production.

Mr. Main — I must say one should not take that figure.

President — It should not be considered the maximum but it should be considered as the minimum?

Mr. Main — He considered it was the maximum from within what he was discussing. It is not quite clear actually what he was discussing so that I should like that figure cut out if you have no objection.

President — In reply to question 13 you say the Bombay Presidency produces more *gur* than can be consumed?

Mr. Main — That is very inconsistent with the figures you have from the statistics of railborne trade. I think as I said in the morning a large part of the imports 10 years ago came from Madras. Taking the last year (1921-22) we imported 11 lakhs of which Madras contributed 4½ lakhs.

President—We took the evidence of the two largest *gur* dealers. One deals in cube *gur* and the other in lump *gur*. They both said that they exported to Bombay and the Nizam's Dominions. One of them said that his business had at one time amounted to as much as Rs. 7 lakhs a year, but now that it was very much less.

Mr. Mam—This Revenue Officer who was investigating the Deccan Canals 8 years ago mentioned in his report that the Madras imports had stopped. I am not able to check how he discovered that.

President—That was confirmed to a certain extent by what the dealers said. They said, 'Our imports into Madras three years ago stopped and therefore the prices that we got will be very much lower,' and the reason why they stopped was the heavy competition with *gur* imported from Northern India. Their imports had been replaced by *gur* from Northern India which produces a large amount of *gur*.

Mr. Mam—A large part of the imports 10 years ago were brought from the United Provinces and apparently the *gur* went into the Kathiawar Peninsula wherein lay many Indian States.

Dr. Matthal—So that the position was when Madras sent *gur* into Bombay most of that was *gur* which was comparable with Deccan *gur*.

Mr. Mam—Yes, not our best *gur*.

Dr. Matthal—Deccan inferior?

Rao Sahib Vagholkar—Yes.

Dr. Matthal—But it would be consumed here?

Rao Sahib Vagholkar—Yes.

President—You don't make cube *gur*?

Rao Sahib Vagholkar—No.

President—It compares very favourably with Bombay *gur*, very light colour and it is more like a sweetmeat.

Dr. Matthal—It looks and tastes like toffee.

Mr. Mam—I think both Madras and Bombay are exporting to Hyderabad.

Rao Sahib Vagholkar—In the Nizam's Dominions, of the *gur* imported, nearly 85 per cent goes from our canal area and 15 per cent goes from Madras. That is only one area, Parbhani.

Dr. Matthal—Where is that situated?

Rao Sahib Vagholkar—Near Aurangabad.

Dr. Matthal—That is the one market?

Rao Sahib Vagholkar—There the local consumption is 80,000 tons of which 85 per cent goes from the Deccan area and 15 per cent goes from Madras.

President—How far is it situated from your Deccan Canal area?

Rao Sahib Vagholkar—I think the railway freight from Kopergaon to Parbhani is Rs. 8 a maund.

Dr. Matthal—Whereas the freight from Coimbatore to Aurangabad would be considerably higher than that?

Rao Sahib Vagholkar—Yes.

President—One would suppose that if the Deccan canal area is nearer to that, it would be supplied from the Deccan area, because you have the freight advantage.

Rao Sahib Vagholkar—Yes.

President—In answer to question 85 you say that there is a small factory near Poona which manufactures white sugar from cane. How much sugar can it turn out?

Mr. Patwardhan—It is a small plant and it was crushing cane of 100 acres, that is 30 tons of sugar.

President—Does it work in conjunction with the distillery?

Mr Patwardhan —Not with the distillery. It is worked with the vacuum pan method and molasses are being sent away to Nasik.

President —Is it working satisfactorily?

Mr Patwardhan —No.

Dr Matthai —Is it still working?

Mr Patwardhan —Yes. Then sugar is sold at 6 lbs per rupee.

President —In answer to question 36 as regards the possession of cultivable land by a factory manufacturing sugar, it is stated that it is impossible in the Deccan canal area for sugar factories to be established unless the control of the land is vested in the factories on an agreement fixed by Government under which the land will be handed over to cane cultivation once in three years.

Mr Main —There are two alternatives, acquisition or this.

President —The second system is really the system which is in force in Java.

Mr Main —I believe it is very much on those lines.

President —I understand that it is not proposed that this should be brought about by any sort of legislation, but by departmental action by way of refusing a supply of water from cultivators who would not lease their lands.

Mr Main —That would be one way of doing it.

President —The system which is considered to hold out the greatest promise is to give agreements under which cultivators must hand over their lands every three years. This is based on the Java system.

Mr Main —Yes.

President —That is to say when you gave water for irrigation, you would insert a clause?

Mr Main —When the sugarcane turn comes, the owner hands over the land to the Company. That is what the proposal means.

President —Is that a feasible proposition?

Mr Main —It is not quite equitable to the landowner.

President —Do you think it is feasible?

Mr Main —It could be done. There is nothing to prevent the Irrigation Department refusing to give water unless a certain order is complied with.

President —It would be possible under the rules of to day, but if the matter came before the Legislative Council?

Mr Main —I believe it could be done.

President —But the question is whether the agriculturists would accept it.

Mr Main —I don't think it would work well. There is the political unrest.

Dr Matthai —I suppose the only kind of reasonable demand the Irrigation Department could make on the cultivator is that he should put the land under sugarcane. They cannot very well go further and ask him that the sugarcane that he cultivates should be handed over to the factory for sugarcane cultivation.

Mr Main —He has got to leave the land under this proposal in the cane year.

Dr Matthai —If he puts the land under sugarcane cultivation and makes gur and is able to make a better thing of his land, then to ask him to hand it over to a factory is unfair unless of course the rental he gets from the factory makes it worth while.

Mr Main —They will probably be dealing with men who have no knowledge of sugarcane. The tract is a poverty stricken locality where there is very little capital. The canal has only recently come into that area. If such people were called upon to grow sugarcane, it would be very difficult. The only way to do it is to rent the land. That was the sort of precondition in the minds of these officers, but I think it can only be worked by negotiation.

President —You will have opposition, and it would be necessary to have an Arbitration Board, unless cultivators are to be compelled to lease the land to the factory.

Mr Main—It will have to be controlled

President—There will have to be Government control You will have to adopt the Java system lock, stock and barrel

Dr Matthai—It is not exactly compulsion, but a traditional practice

Mr Main—Yes, by negotiation It might pay a man to let his land in that way As he hasn't got the capital, the knowledge or the necessary skill, it might pay him to hand over his land to the factory and get a very good rent, say Rs 85 but then there is of course the sentiment and therefore I think negotiations should be the means of bringing it about

Dr Matthai—In the kind of area to which they refer, supposing a sugar factory is started which wants to crush about 100 tons of cane a day, would it mean negotiating with an enormous number of ryots?

Mr Main—It would, because the holdings are very small

President—In any case it seems doubtful whether any one would care to establish a factory, if the matter was left to negotiation, because some tenants might stand out and some might abandon their holdings

Mr Main—Negotiations will have to precede the establishment of the factory That will be the first step

Dr Matthai—The price of your Deccan gur is high I suppose on a basis of voluntary arrangement the rental that the factory would have to pay would be so high that the factory might find their own proposition uneconomical?

Mr Main—I believe that point was examined by Mr Wynne Sayer

President—Have you got a copy of Mr Wynne Sayer's proposal?

Mr Main—It has never been published in final form

President—Was he on special duty?

Mr Main—He came over and attended one or two conferences and he put forward that proposition but it has not materialised and is still under consideration

President—When we meet Mr Wynne Sayer, we will be able to get a copy from him

Mr Main—There are still formidable difficulties The rent was rather a stumbling block It was brought up in the conference, February 1929, and we gave him certain figures and he said he would proceed to work out proposals So far he has not proceeded

President—That would be the difficulty

Dr Matthai—The only case that we have known of leasing on those lines is the South Indian arrangement at Nellikuppam Messrs Parry and Company have got a system of long leases They have worked for many years Now they find that the rent they have to pay is such that it is better for them to buy their canes from private cultivators

President—This Belapur factory was compulsorily acquired?

Mr Main—Yes, the land

President—It is on the right bank of the Nira Canal that considerable lands are available?

Mr Main—That is the latest and biggest canal

President—Are these reclaimed areas?

Mr Main—These are new areas

President—Not leased to anybody Are there no tenants at present?

Mr Main—It is a famine area which has been converted into an irrigated area

President—Are there tenants?

Mr Main—It is all occupied

President—They will have to eject somebody?

Mr. Main—It will have to be acquired from them. There is very little Government land.

President—So, acquisition proceedings will be necessary here too.

Mr. Main—Yes, if negotiation is not adopted the places where acquisition will not be necessary are near some of the old canals where substantial lands have been waterlogged and where reclamation is being made.

President—Your own Department says that compulsory acquisition is difficult and would be politically opposed in the Legislative Council.

Mr. Main—That is the general feeling.

President—So that if compulsory acquisition is opposed in the Council it does not seem there is very much prospect of success.

Mr. Main—It has been proposed that a smaller type of factory might be suitable in the conditions of the Deccan.

President—Under a high protective tariff, it might possibly be successful but as a final solution it seems that smaller sugar factories would some time or other have to be replaced by larger factories, if the output of a factory is small it is uneconomic.

Mr. Main—I have discussed this point with the Director of Agriculture, United Provinces. He thought that smaller factories could be worked on economic lines.

President—It may be necessary in the United Provinces. I do not know whether there is any future here in that line. Of course in the United Provinces they are compelled to work on a small scale because the areas are so badly served by communications that it would be impossible to establish large factories.

Mr. Main—Yes.

Dr. Matthai—So that the general position is if a large sized new factory is to be started the only way in which the cane supply can be ensured is by a voluntary system of leasing if that can be arranged.

Mr. Main—That would be the best.

Dr. Matthai—Or they would have to take their chance of buying the cane from cultivators.

Mr. Main—I agree.

President—Do you think that there is a considerable danger to the *gur* industry from the import of unrefined brown sugar from Java which is converted into *gur*?

Mr. Main—I think we are threatened in two ways (1) by the higher class of sugar which would go into the refineries and displace *gur*, thus throwing more Indian *gur* on to the market and (2) by the lower grades of Java sugar which can be turned into *gur* in this country. We are threatened on two sides and we think that this threat is a very real one and that it is absolutely necessary on that ground to protect the *gur* industry.

President—Of course, the manufacture of brown sugar into *gur* has only affected the industry in the proximity of the port?

Mr. Main—The two places I have heard of are Ahmedabad and Bombay. Now it is rather in the initial stage but it might develop further upcountry.

President—We were told by the Industries Department that there were two main directions in which sugar was converted into *gur* in Bombay. First of all, it was a sort of bye product of sugarcandy manufacture and secondly it was made by mixing molasses with inferior sugar only at particular times of the year when the price of *gur* was high. It was said that this manufacture was not a regular industry but when people saw that the price of *gur* was high or that there was going to be a shortage of crop of sugarcane, they bought sugar in old lots and mixed it with molasses and turned it into some sort of *gur*.

Mr. Main—If instead of being spasmodic it developed into a first class industry it would be dangerous. The point I want to make is that if a

protective tariff is put on sugar the margin between the white sugar and brown sugar should be kept very narrow

President—Mr Wynne Sayer in one of his sugar reports states that the *gur* market in India is a constant invitation to the Dutch manufacturers in Java to undertake the manufacture of *gur*. But we gathered from what the Imperial Council of Agricultural Research stated in their representation that only 700 tons of *gur* were imported into Bombay. The cup sugar imported is manufactured in Java by farmers in very much the same way as *gur* is manufactured here, so that the danger which was visualized by Mr Wynne Sayer has not materialised at all.

Dr Matthai—Suppose for example the protective duty on white sugar were Rs 8 a cwt then what would be your suggestion as to the proper duty on the inferior classes of sugar which are likely to upset the *gur* market?

Mr Main—The duty should be so arranged as to stabilise the price of white sugar at a minimum of Rs 10 8 0 at the ports and as regards brown sugar and second grade sugar there should be a difference of only 8 annas. The price of white sugar should be stabilised at Rs 10 8 0 and for the lower grades the price should be stabilised at Rs 10.

President—Is there any object in really making the distinction?

Mr Main—I have no objection to that. But if you do make a distinction, it should be very narrow.

President—As far as we can make out sugar below 10 D S is imported very little and below 23 D S and 10 D S whatever is imported is mostly for the Army.

Mr Main—I believe the Army consumes a lot.

President—There does not seem to be any point in distinguishing between the classes?

Mr Main—That would meet my point even more than what I have suggested.

Dr Matthai—Of course the point that needs consideration there is that if you raise the duty to this extent on the inferior classes of sugar, would that necessarily have a corresponding effect on the price of *gur* here? All these graphs show a close correspondence between the prices of sugar and the prices of *gur*.

President—The provisional conclusion we have arrived at is that the price of *gur* depends not so much on the price of white sugar as on acreage and crop.

Dr Matthai—If it is true that in the Bombay Presidency supply has overtaken demand, a rise in the price of *gur* may mean a fall in the demand.

Mr Main—The moment the price goes up, the tendency would be to grow more.

President—The prices of *gur* have been very high in the past but the production has not gone up very much.

Mr Main—We have now more irrigation facilities than before. So, I think that our area would expand.

Dr Matthai—You would have to explain away your graphs then because the graphs for the past ten years show apparently a close correspondence between the price of imported sugar and the price of *gur*.

Mr Main—I thought we agreed this morning they did correspond when the change was big but not when the change was limited.

Dr Matthai—Not in the cities. In the cities if you take the Imperial Council's graph based on the Bombay and Poona prices and the Madras graph, the correspondence is fairly close. It is in Satna that you don't have that close correspondence. In village areas it is possible that the price of *gur* will be determined largely by conditions of local supply and demand and would not necessarily correspond to the variations in the prices of sugar.

Mr Main—Exclude all sugar below 23 D S.

Dr. Matthai —The kind of suggestion that we would make tentatively is that if the duty on white sugar was Rs 8 a cwt, probably the best thing to do would be to apply that Rs 8 to all grades of sugar

Mr. Main —Yes

Dr. Matthai —We have heard the suggestion that certain classes of inferior Java sugar corresponding to *gur* come rather as molasses than as sugar

Mr. Main —I believe they imported that quality

Dr. Matthai —The duty on molasses is at present 25 per cent, *ad valorem*

Mr. Main —Yes

Dr. Matthai —So that if you fixed the duty on inferior classes of sugar at Rs 8 and left the molasses at 25 per cent that would leave them a loophole

Mr. Main —You will have to prohibit that

President —It would be all right if you fixed the duty for all classes of sugar and specified molasses as such?

Mr. Main —Yes

President —Chemical analysis will enable one to distinguish clearly molasses below 35 per cent sucrose

Dr. Matthai —If you imported molasses below 35 per cent sucrose content and then you mixed it with inferior sugar you could get *gur* out of it?

Mr. Main —Yes

Dr. Matthai —If you mix it half and half you may be able to produce an article which would look like *gur* and be accepted as such

Mr. Main —Yes

Dr. Matthai —Have you got the Native States figures for 1929-30?

Mr. Main —You mean the area and the yield figures?

Dr. Matthai —Yes

Mr. Main —Area (Indian States) total—25,857 acres, Yield of *gur*—58,476 tons

President —You were saying just now that the price of sugar should be stabilised at Rs 10 8 0. How do you propose to stabilise it?

Mr. Main —The suggestion was that the duty should be so adjusted that the price of sugar at the ports should not fall below Rs 10 8 0. I do not know whether that could be done once for all or whether you will have to have a scale

President —Any scale would be impossible and most disturbing to trade. We can allow such a margin in the duty as to ensure that the price would never fall below Rs 10 8 0

Mr. Main —Yes. The alternative would be to assume the minimum delivery price at Bombay and make the difference between Rs 10 8 0 and that the amount of duty

President —That seems to be the only practical method. We must make some allowance for a possible decrease in delivery price

Mr. Main —Yes

President —Are there any other suggestions that you would like to make?

Mr. Main —That is all I wanted to say

DIRECTOR OF AGRICULTURE, MADRAS

(1) Oral evidence of Mr A C EDMONDS, Deputy Director of Agriculture, 1st Circle, recorded at Ootacamund on Tuesday, the 8th July, 1930

President — You are Deputy Director of Agriculture in the Madras Presidency?

Mr Edmonds — Yes

President — What is your circle?

Mr Edmonds — 1st Circle

President — What is the name of the circle?

Mr Edmonds — It comprises Godavari East and West, Vizagapatam and Ganjam

President — How long have you been in charge of it?

Mr Edmonds — Since 1921

President — Then you have a thorough knowledge of the circle?

Mr Edmonds — I have

President — Apart from Coimbatore, is that the most important sugarcane tract in Madras?

Mr Edmonds — Yes

Dr Matthai — Is it larger than Coimbatore in sugarcane area?

Mr Edmonds — It has about 35,000 to 40,000 acres under sugarcane—roughly about a third of the area under sugarcane in the Madras Presidency

Dr Matthai — So that it has really a larger area under sugarcane than Coimbatore?

Mr Edmonds — Yes

President — Have there been considerable variations in acreage since you have been in charge of the circle?

Mr Edmonds — There have been from about 40,000 to about 50,000. Now it is between 45,000 and 50,000. I think

President — That is to say, there has been a steady increase?

Mr Edmonds — Over the last five or six years there has been a general tendency to rise

President — What do you attribute that to?

Mr Edmonds — One of the factors I think is the fall in the price of paddy

President — Do you think that the price of gur has varied at all?

Mr Edmonds — It has not varied very much. With the exception of three years, viz., 1919-21, when the price of gur was abnormally high, there has been a tendency to fall

President — At what level did the prices during those three years stand?

Mr Edmonds — During those years it averaged about Rs 50 to 55 per candy. It even went up as high as Rs 80 per candy of 500 lbs

President — That is equal to about 6 Bengal maunds?

Mr Edmonds — Yes

President — At present what is the price?

Mr Edmonds — It is between Rs 35 and Rs 40

President — We were told in Coimbatore that two years ago the price of gur was low. Was that reflected in your circle?

Mr Edmonds — We have had falls to Rs 30

President — In Coimbatore we were told that for 300 lbs in 1923 the price was Rs 21 but by 1927 it had fallen to Rs 15

Mr Edmonds — Is that for eating jaggeery?

President—For lump jaggery

Mr Edmonds—Is that retail or wholesale price?

President—He is a wholesale purchaser and I suppose he was speaking of wholesale. Then again by 1920 it rose to Rs 22. The price remained steady from 1923 to 1925, in 1926 it fell to Rs 17, in 1927 it was Rs 15 and it rose again in 1928 to Rs 23 and in 1929 to Rs 22. These are wholesale prices because a good deal of jaggery is exported to Bombay and Poona side.

Dr Matthai—Your prices are for cube jaggery?

Mr Edmonds—No. They are for lump jaggery. I do not know whether my rates are altogether reliable. I got them from local merchants. That was the best I could do. I got them from their books.

Dr Matthai—Probably your prices are more in the nature of retail prices.

Mr Edmonds—I think that they are wholesale prices. I intended them to be average prices at the main buying centres or godown.

Dr Matthai—These prices were given to us by a man who is really a manufacturer of jaggery and he sells at these prices so that these are manufacturer's prices and your prices are probably the prices of large dealers.

Mr Edmonds—They are the buying prices from the miyats mainly. The commission I understand on which the merchant operates is small. Of course, it is difficult to arrive at an accurate figure, but I have always understood that the commission is small.

Dr Matthai—Could you give us a list of prices?

Mr Edmonds—Yes.

President—Have you got them?

Mr Edmonds—Yes (handed in a statement of prices).

President—What is the difference between white jaggery and black jaggery?

Mr Edmonds—Black jaggery is the jaggery that has been heavily lured in order to reduce the inversion of sugar in the process of boiling. It is the form in which the jaggery is exported. It improves the keeping qualities.

President—What do you attribute these variations in prices of jaggery to?

Mr Edmonds—I tried to get some figures for imported sugar to examine that aspect.

President—Imports of Dutch sugar?

Mr Edmonds—Yes, low grade Dutch sugar.

President—You can take it that the price of sugar has been steadily going down during the last five or six years.

Mr Edmonds—For both imported and Indian-made sugar?

President—Yes. Taking the last five years in which sugar prices have been going down steadily, I find that the prices of jaggery in your circle were Rs 21 in 1924, Rs 32 to Rs 35 in 1928 and Rs 53 to Rs 50 in 1929 when sugar was very low. So that these figures would not show any connection between white sugar and jaggery prices at all.

Mr Edmonds—No.

President—It was very much the same in Coimbatore and the reasons we were given were (1) the character of the crop—whether it was a good outturn or not—and (2) the demand from elsewhere. For instance, the Bombay side might be supplied, as it has been in recent years, from the Punjab at lower prices than Coimbatore can produce or is willing to sell anyhow. Is there any special reason, for instance, in 1929 why the price has suddenly risen to Rs 53?

Mr Edmonds—That has relation to the total outturn.

President—Was there not a very good crop in 1929?

Mr Edmonds—It was considerably low. The total yield was 244,000 tons as against over 800,000 in 1926-27.

President—Had the acreage decreased or simply the outturn?

Mr Edmonds—There was a decrease in outturn. The acreage also fell below normal in 1928-29.

President—So that it looks as though the high price was the result of a short crop either due to climatic reasons or shortage in acreage.

Mr Edmonds—I have not been able to ascertain exactly how they calculate the normal yield. Up to 1928-29 it was nothing bigger than 105,000 and odd acres. There was a rise from 102,000 to 113,000 in 1924-25 and that area continued more or less constant for the following three years. It was 115,000 acres in 1927-28.

Dr Matthai—How do you get the total yield of *gur*? Do you just deduce it from the acreage under cane?

Mr Edmonds—There are several points which I want to clear up with the Statistical Assistant about that. I am afraid I cannot tell you exactly how it is calculated. In the season and crop reports I see no reference to an allowance for canes that are chewed and also for seed.

Dr Matthai—We have not been able to make out how exactly the figure for the yield of jaggery is arrived at because there are different proportions applied in different areas.

President—I understand that experiments are carried out as to the outturn in a particular area at certain selected *gur* mills in northern India.

Mr Edmonds—We have had no crop cutting experiments in Madras during the last 15 years. I believe a few were done some time ago but apart from that we have had none and in the season and crop report you will see that the average outturn per acre of jaggery in each district is shown as a standard each year. It does not vary. I have not been able to ascertain how that standard is arrived at.

President—Supposing the area remains constant and there is a reduction in the outturn of jaggery shown, that would really imply that the outturn of cane—I mean the mundage of cane—per acre in that particular area was less because as you say the outturn of jaggery is taken at some constant standard.

Mr Edmonds—It is taken as a standard for each district and the figure shown at the bottom of the season and crop report bears a relation to the standard yield which is unknown to me. It is a figure that is calculated on the basis of three factors, viz., (i) area, (ii) standard outturn per acre.

President—Do you mean the standard outturn of cane?

Mr Edmonds—Standard outturn of jaggery I think per acre and (iii) the seasonal factor. The last is a fraction representing the yield of the crop reported on to the normal yield.

President—That has no relation to the actual effects of the season.

Mr Edmonds—The seasonal factor is the last factor.

President—What I mean is this. In any one year the outturn of cane per acre may not be very high but in that particular year the outturn of jaggery per ton of cane may be somewhat higher than normal.

Mr Edmonds—Very much so.

President—So that there is a very large margin for error.

Mr Edmonds—Very large indeed. It fluctuates considerably.

President—Getting back to prices, as far as one can see, the price of jaggery in your circle depends mainly on the outturn of the crop.

Mr Edmonds—I think that that is probable.

President—Do you export it at all to other provinces?

Mr Edmonds—It is mainly exported.

President—Where to?

Mr Edmonds—Principally to the Nizam's Dominions and Bombay and to a less extent to Calcutta.

President—So that your prices might depend, for instance, on the outcome of the Punjab which also supplies Bombay?

Mr. Edmonds—Yes.

Dr. Matthai—The figures that you have collected, are they all from the same market?

Mr. Edmonds—The figures which I have given you are Vizagapatnam figures. They were collected from one market—the biggest market.

President—In your circle how far is sugarcane a cash crop?

Mr. Edmonds—It is very much so.

President—That is to say how far does the cultivator rely on it for meeting his money obligations?

Mr. Edmonds—Under the conditions in which it is grown it has no competitor—I mean no serious competitor in the way of a commercial crop.

President—What are the competitors there?

Mr. Edmonds—Gingelly is the only competitor on wet land.

President—What about groundnut?

Mr. Edmonds—It is not a competitor.

President—Not cotton?

Mr. Edmonds—No.

President—In your circle cane is the only cash crop?

Mr. Edmonds—It is on wet land. We have also to some extent jute which is locally Dacca hemp.

President—Is it Sun Hemp?

Mr. Edmonds—No. It is Bimbi jute. It is a short crop that is not a competitor.

President—From the cultivator's point of view, I suppose he would continue to plant sugarcane to some extent regardless of the price that he is getting for jaggery?

Mr. Edmonds—Here is a graph which I have plotted showing the price of paddy in relation to the area of cane. It seems to me to be the most definite factor concerned with the area under cane. I have also plotted one showing the price of jaggery.

President—Then, paddy is not a cash crop?

Mr. Edmonds—Any considerable fall in price means that the raiyat is short of money. It is an incentive to put a larger area under sugarcane.

Dr. Matthai—But a good deal of the rice grown in your area is sold, that is to say, all the rice grown in your area is not consumed by the raiyat and his family. A certain amount is sold?

Mr. Edmonds—I think that a very big proportion of it is sold.

Dr. Matthai—To that extent rice becomes a cash crop?

Mr. Edmonds—Yes. There has been a continual fall in the price of rice during the last ten years and we are receiving a certain amount of Burmese rice.

President—When you say that sugarcane is the only cash crop I understand you to mean that having regard to the continued fall in the price of rice, sugarcane is the only crop to which the cultivator must reasonably look now to meet his cash obligations.

Mr. Edmonds—Yes. I speak particularly with reference to the area where there is underground water supply. You can rule out the other area. Where there is underground water supply and in areas where sugarcane can be grown there is no serious competitor, I might even say there is no competitor.

President—When the price of rice was high ten years ago, you might have regarded rice also as a cash crop?

Mr Edmonds—I would hardly have considered it so. It was Rs 8 or 11 about 1920-21 per Imperial maund. The margin of profit even then is very much out of proportion to what is obtainable from a commercial crop. The average price now is about 80 lbs per rupee. At that price there is practically no profit in cultivation.

Dr Matthai—I suppose your point would really come to this. Although there has been a fall in the price of jaggery from Rs 55 to somewhere about Rs 40, there has been a small increase in the average under sugarcane and that is due to the fact that although the price of jaggery has fallen the price of the competing crop, viz., rice has fallen still more. Is that the position?

Mr Edmonds—I think so.

President—You could not give us any idea as to the cost of cultivation of sugarcane?

Mr Edmonds—I can only give you a general idea.

President—Have you any demonstration farms where sugarcane is grown?

Mr Edmonds—No, we have not. We have only research stations. Attempts are being made now to collect data concerning the costs of production under rayats' conditions, that is to say, in the course of the year under various items. We have only a very few of them. I am afraid I cannot help you much in that direction. But I can give you a general idea.

President—Could you give us a general idea of the normal costs in your circle?

Mr Edmonds—I have worked out some figures but I cannot vouch for their accuracy. They are intended only to give you a general idea. I think in Godavari we might take the cost of producing a maund at somewhere between 65 and 75 annas.

President—For 100 maunds of sugarcane how much jaggery would you get?

Mr Edmonds—It is very difficult to arrive at a figure, with so many varieties of cane. But I think that you can take it at $\frac{1}{4}$ th.

President—That is about 12 maunds.

Mr Edmonds—That is a fair figure to take. I think that the Sugar Committee took that. I think that in Madras they were prepared to take that figure.

President—You say that at present the price of jaggery is about Rs 7 per Bengal maund, so that for $12\frac{1}{4}$ maunds you would get about Rs 90 for your jaggery and cultivation costs you $6\frac{1}{4}$ annas a maund.

Mr Edmonds—I think that you would have to put it a little higher, say 7 annas which would be a nearer figure.

President—So, the cost of cultivation would be roughly Rs 44 for an output of Rs 90 worth of jaggery?

Mr Edmonds—That is about right.

President—What would be the maundage of cane per acre roughly? If you like, you could give it in tons.

Mr Edmonds—For Vizagapatnam between 20 and 25 tons of cane, and for Godavari 30 or a little over 30 tons.

President—Roughly the cost of cultivation will vary between Rs 200 and 300 per acre.

Mr Edmonds—That does not include the rent of land.

President—What would that be?

Mr Edmonds—In Godavari it would not be less than Rs 80 per acre.

President—As much as that?

Mr Edmonds—Yes.

President—It comes to Rs 340—roughly Rs 350 to 400 per acre.

Mr Edmonds—Yes.

President — Is against the price of jaggery varying between Rs 550 and Rs 630 per crie

Mr Edmonds — Yes. These are very rough figures. Possibly they may be on the low side.

President — Do you mean the cost of cultivation?

Mr Edmonds — Yes.

Dr Matthai — That leaves a profit to him of about Rs 150 per acre.

President — A profit of Rs 150 to Rs 200 per acre.

Dr Matthai — That does not include the cost of making it into jaggery?

Mr Edmonds — No, it does not. That will be Rs 8 or 10 per candy. That will be another Rs 100 or 105.

Dr Matthai — How does that compare with the margin of profit on rice cultivation, taking the expenses of cultivation and possibly also the fact that you could raise two crops of rice in the same period in which you get one crop of sugarcane?

Mr Edmonds — Ordinarily one would get two crops.

Dr Matthai — So that if you took the expenses of cultivation and the output at present prices, would it be possible to get some rough idea?

Mr Edmonds — In the case of paddy crop it depends so much on the different localities. I think one might say at present prices and under average conditions it would be Rs 15 or 20.

Dr Matthai — Per acre?

Mr Edmonds — Yes, under average conditions taking the uplands and deltaic area. On the basis of deltaic figures it would be double.

Dr Matthai — If you took the average of Rs 15 to 20 per acre of paddy and an average of about Rs 50 for sugarcane, would that roughly represent the position?

Mr Edmonds — Are we speaking with reference to the three northern districts?

Dr Matthai — I am speaking of your area.

Mr Edmonds — The margin of profit on rice will be higher speaking for these, because it comprises those large irrigated areas. In Godavari it is as high as anywhere else in the Presidency.

Dr Matthai — How much would you put it at?

Mr Edmonds — Rs 50 or 60 for rice in Godavari and possibly Rs 30 or 35 in Vizagapatam.

Dr Matthai — The figure that we got for sugarcane from the rough figures that you give is about Rs 50 to 60 in Vizagapatam.

Mr Edmonds — Yes.

Dr Matthai — Would it give something like a correct proportion between the profit on sugarcane and the profit on paddy say in a district like Vizagapatam if it were estimated at Rs 50 to Rs 60 on sugarcane and Rs 30 to 35 on paddy?

Mr Edmonds — I think we may have put the sugarcane crop at a low figure.

Dr Matthai — How much of the irrigated area in your circle is under sugarcane? Roughly what proportion?

Mr Edmonds — I am afraid I cannot give you the figure.

Dr Matthai — It must be a very small proportion.

Mr Edmonds — I think I remember having seen a figure quoted for Godavari in the Sugar Commission's Report—somewhere between 1 and 5.

Dr Matthai — Is that right?

Mr Edmonds — I am afraid I cannot tell you.

Dr. Matthai—Although the figure may not be accurate I think the true proportion probably lies somewhere about that.

Mr. Edmonds—Yes at that time. Since then there has been a fall in the area in Godavari.

Dr. Matthai—Do you mean the area under sugarcane?

Mr. Edmonds—Yes.

Dr. Matthai—Practically the bulk of the other land is under paddy?

Mr. Edmonds—Yes.

Dr. Matthai—How exactly do you account for the fact that paddy is such a favourite crop although the actual profits are better on sugarcane than on paddy?

Mr. Edmonds—In Godavari it is mainly a question of water supply. On these very heavy deltaic soils one has to adopt a fairly long rotation, otherwise the deterioration of the soil is very much more rapid than where the soil is well drained. That being so, it makes it difficult to supply water economically at the time of the year when water supply is short. It means running water down canals and high losses and the policy of the Revenue Department naturally is to distribute water in the most economical manner. Owing to the fact that we have no data regarding the water requirements of sugarcane, their policy is one of preference for paddy and since the introduction of new rules unfavourable to sugarcane and other such crops there has been a gradual and definite fall in area.

Dr. Matthai—It is largely difficulties of cultivation I suppose.

Mr. Edmonds—In Godavari, undoubtedly. That of course does not apply to Vizagapatnam.

Dr. Matthai—Godavari has a larger area under sugarcane than Vizagapatnam?

Mr. Edmonds—Not now. Statistics were not maintained prior to 1903-04 but local information is that it was about 30,000 acres in Godavari at the end of the last century.

Dr. Matthai—Although the farmer may actually be able to get a better profit on sugarcane the difficulties of cultivation prevent him from extending the area?

Mr. Edmonds—In Godavari it is definitely water supply and indirectly the fact that paddy is grown and produces conditions of soil which make it impossible for sugarcane to be grown. Owing to the long rotation, it makes it difficult for water to be supplied.

Dr. Matthai—I suppose to some extent paddy would be easier to market than sugarcane.

Mr. Edmonds—Undoubtedly.

President—Could you give us the main heads under which the expenses of sugarcane cultivation fall? Perhaps you might give us a statement showing the costs of cultivation under various heads according to the estimates you have given us.

Mr. Edmonds—I think that that estimate will require correction. I have only just jotted down what may be considered reasonable figures. I think I had better send you a statement which would be more accurate.

President—Yes. In the last ten years have there been any crop failures in your area? In your circle have there been partial failures of sugarcane and partial failure of other alternative crops such as paddy?

Mr. Edmonds—No, we have not had any crop failures.

President—Generally speaking, I suppose your circle is not subject to crop failures to any large extent?

Mr. Edmonds—No.

President—Has there been any material change in the cost of cultivation?

Mr. Edmonds—In Godavari it has gone up, during the last ten years. I think we can say that it has gone up by 5 to 10 per cent on labour and possibly a little under that figure in Vizagapatam.

President—What about the difficulties of financing cultivators? Has that had any effect on the area? For instance, at present we are told that even in rural areas money is extremely difficult to obtain from Bankers or money lenders. Perhaps, Rs 200 to 300 is required for sugarcane. *Prima facie* it would appear that in a period such as the present one the area under cane cultivated by less substantial men would tend to decrease. Have you noticed anything of that sort?

Mr. Edmonds—As far as I have been able to ascertain about 75 per cent—I speak with reference to Vizagapatam where we have about 80,000 acres under sugarcane—about 75 per cent of the cultivators cultivate sugarcane on borrowed capital.

President—Now you have been in the circle for ten years. About the commencement of the time, money was also rather tight in agricultural areas?

Mr. Edmonds—I think so. I don't think that there has been any appreciable change in that respect.

President—For instance, in 1921-22 was there any record to show any fall in your area?

Mr. Edmonds—In what year?

President—In 1921-22. My recollection was that money was rather tight in that year.

Mr. Edmonds—The statement I have given you might show a rise or fall.

Dr. Matthai—There has been a steady increase in Vizagapatam. In Vizagapatam there was a marked fall in 1920-21 as compared with 1919-20, that is to say, a fall from 81,000 to 23,000 acres.

Mr. Edmonds—Yes.

Dr. Matthai—But since 1920-21 there has been a steady increase up to 1923-24 and that has been more or less maintained.

Mr. Edmonds—I think there was a rapid increase in area in response to very high prices of jaggery. That was at the expense of rotation and the crop suffered in consequence. I think that the present rise is probably due to new areas. This increase is likely to be a more permanent rise.

Dr. Matthai—What is the particular system of rotation in the Vizagapatam district?

Mr. Edmonds—On wet lands there is no definite rotation. Sugarcane is generally rotated either once in two or three years or even 4 years according to water supply.

Dr. Matthai—Supposing there was a factory in that area and they wanted to have say 500 acres steadily under sugarcane, making allowance for rotation how many acres would they need? About 2½ times that?

Mr. Edmonds—It would depend on where the factory is located. If it was located on a low lying part of the irrigation system it would require a 4 or 5 years rotation for continuous cropping—to be safe you would require 5 years rotation on wet land, i.e., sugarcane once in 5 years.

Dr. Matthai—Supposing you tried to make an approximate average for the district, would you say 3 years?

Mr. Edmonds—I don't think it would be safe. In view of cane being rotated with paddy I think that this wet land cultivation is definitely a limiting factor. Whether it is applicable to the other parts of the Presidency or not I am unable to say.

Dr. Matthai—That is to say, there is no definite system of rotation which under the conditions of wet cultivation you can maintain?

Mr. Edmonds—There is no definite system. Other limiting factors are (1) water supply, and (2) area of the holding. Where the areas are larger, we tend to get a longer rotation.

Dr. Matthai—Sugarcane and paddy are all the time rotated?

Mr. Edmonds—Yes, with short crops such as millet and gingelly

President—So far as you can say, finance has not affected sugarcane?

Mr. Edmonds—I don't think it has

President—On the other hand I take it that it would require a very considerable rise in the price of jaggery to make any considerable difference in the area under sugarcane?

Mr. Edmonds—I think so

President—Because for one thing the tenant is fairly conservative. It takes a good deal to move him to increase the area and secondly the man who is accustomed to borrowing Rs. 300 or 400 from a private moneylender would find it more difficult to increase his borrowing if he wished to double the area.

Mr. Edmonds—He would. His holding is already so small. I don't think that we can look for an increase in the area on individual holdings. If we get an increase it will be in other areas. It will be outside the sugarcane area.

President—By outside you mean new men taking up sugarcane cultivation?

Mr. Edmonds—Yes

President—In such a case he would also require finance?

Mr. Edmonds—He will

President—So, unless the price is a very substantial rise, he may have difficulty in securing it.

Mr. Edmonds—I doubt it. It very largely depends upon demand, I mean the demand outside the district.

President—That is to say, people buying jaggery advance so much in the year before?

Mr. Edmonds—Yes. The local merchants function as commission agents. They advance him money as he requires it in small sums usually and charge him up to 20 per cent.

President—Then in the case of a man putting down sugarcane for the first time, he will have to get into touch with the commission agents to begin with?

Mr. Edmonds—Yes, he would unless one gets the local moneylender operating. Then he naturally has to accommodate him for other expenses.

President—If the commission agent foresaw a very large increase in the price of jaggery, he might go outside his ordinary routine customers and try to persuade other customers to put down sugarcane.

Mr. Edmonds—Yes

President—In order to induce him to do so, there will have to be a considerable rise in price. Small variations from year to year would probably not affect the area under sugarcane to any appreciable degree.

Mr. Edmonds—No

President—What is the period of the crop?

Mr. Edmonds—It depends on the variety. It is about 9 to 11 months.

President—Does the fact that the cultivator has to lock up his money for the whole year affect his preference for sugarcane over rice?

Mr. Edmonds—At present prices I think, it would come into his consideration if there was an appreciable rise in the price of rice.

President—10 years ago it was an important factor?

Mr. Edmonds—Undoubtedly. In other parts of the Presidency in the case of cotton undoubtedly it is, especially where you get a commercial crop which comes off the land within a period of five or six months. Certainly it would affect the area under cane immediately. I think probably that is a

reason we have falls in other parts of the Presidency in contrast to these northern districts

Dr. Matthai — Quite likely

President — You have no refineries in your Circle?

Mr. Edmonds — We have the Similkote factory

President — Do they refine from jaggery?

Mr. Edmonds — Yes, from pulmya jaggery

Dr. Matthai — They don't make any attempt to make sugar direct from cane?

Mr. Edmonds — No

Dr. Matthai — What about the Askani factory?

Mr. Edmonds — As far as I know it is not making sugar

Dr. Matthai — It is closed down practically?

Mr. Edmonds — They run their distillery, I think. As far as I know they have not made sugar for the last 4 or 5 years

Dr. Matthai — They are working on the diffusion process. I suppose that didn't exactly suit cane sugar

Mr. Edmonds — I think it is largely a question of getting raw material and getting it at a price at which they could work

President — Could you give us the prices of paddy for the last 10 years? You have given us the prices of *gun* here

Mr. Edmonds — Yes, I will send you a statement later on

President — Are there any localities in your Circle which are suitable for the establishment of a sugar factory refining sugar direct from cane? You remember the Sugar Committee pointed out that in the case of a factory refining direct from cane, there are certain conditions which must be fulfilled if manufacture is to be profitable, there must be a considerable area of cane in the vicinity, say, within a radius of ten miles sufficient to keep the factory occupied and suitable arrangements must be made for the cane to be sold regularly to the factory or in the alternative the Company must obtain a large area and itself undertake the cultivation of sugarcane. Then, of course, there are questions of the variety of cane. Some sort of arrangement with the cultivator is necessary to ensure the proper kind of cane. Are there any localities in which it will be possible to obtain control of a considerable area of cane land in your Circle?

Mr. Edmonds — Not on the established area at present. I am perfectly sure about that. One of the main difficulties is this question of paddy cultivation, and long rotation which is required. You get conditions under which you cannot possibly maintain your yields on your areas if you shorten up your rotation

President — That is to say, you must have a very large area under cultivation in order to make sure of supply?

Mr. Edmonds — Yes, to keep the yield up. I think if one got off the paddy growing areas into the dry land areas—in some of the northern taluks of Viragipattin—and provided an underground water supply could be found—one might be able to find a large area under conditions where one could grow cane under a much shorter rotation and where labour would be cheaper

Dr. Matthai — You will have to grow sugarcane under well irrigation?

Mr. Edmonds — Yes

President — Is that waste land?

Mr. Edmonds — No. It is purely irrigated land

President — Would there be any difficulty in securing the areas for a factory?

Mr. Edmonds — Their value is low. I am assuming that these areas can be found. There are certainly no prospects on the present established area, but it might be possible to find dry areas

Dr. Matthai —As a matter of fact if you are going to have a sugar factory in any of your wet areas, the rent of the land would be excessive

Mr. Edmonds —Yes

Dr. Matthai —And it would make the sugarcane very expensive

Mr. Edmonds —Yes

President —In any case even in the dry areas it would not be possible to apply the Land Acquisition Act. It must be done only by private negotiation, so that there might be difficulties

Mr. Edmonds —At present the Land Acquisition Act is ruled out entirely

Dr. Matthai —I suppose they might make an experiment in those dry areas on the lines of the Nellikuppam experiment. Where it is dry land, it would be easier, I suppose, to negotiate for leases with the ryot?

Mr. Edmonds —I think it hardly comes into our calculations now. It would mean a certain amount of research work. We are not working on that now.

Dr. Matthai —You mean research work as to the possibility of underground water?

Mr. Edmonds —It would mean growing a different variety of cane

President —Have you any knowledge of jaggery from Java being imported and sold in the markets in your Circle?

Mr. Edmonds —No

President —This has been supplied by the Collector of Customs, Madras. It is stated to be imported Java jaggery selling at about Rs. 32 per candy (Sample shown). Have you any idea whether people would eat that?

Mr. Edmonds —No

Dr. Matthai —You mean it is blacker?

Mr. Edmonds —Yes

Dr. Matthai —I understand that it is imported with a view to competing with jaggery

Mr. Edmonds —It might in the sweetmeat trade

Dr. Matthai —That is to say, for confectionery

Mr. Edmonds —Yes

Dr. Matthai —As far as I know there is no sugar below 8 Dutch Standard imported at present. We have not verified it. We have heard of a factory which imports 23 Dutch Standard sugar and manufactures jaggery out of it

President —In your part they would not eat that?

Mr. Edmonds —It is of poor quality, and old jaggery in appearance. From the amount of moisture in it, it would not come up to the lowest standard of eating jaggery in the main sugarcane areas of Vizagapatam and Godavari, but it is distinctly better than a standard sample in the Ganjam district

President —It would be suitable for the manufacture of confectionery, Indian sweets and so on?

Mr. Edmonds —I think it would. It would command a market in the northern taluks, in areas where the quality of the jaggery is poor. But in the main areas which represent about 80,000 to 85,000, it would not come up to the standard

President —How does this compare with the Indian jaggery in point of keeping? It has been in the country for some months. It doesn't seem to have gone bad

Mr. Edmonds —Jaggery at the present time made from last year's crop would be molasses by now under best conditions

President —That has received some special treatment?

Mr. Edmonds —I think it has. I have heard that they have found a treatment in Java for this. I don't know what it is

President —If that was imported in large quantities, do you think it would seriously affect the Indian jaggery and secondly the area under sugarcane?

Mr. Edmonds —Not at the present time from what I know of Coimbatore quality and the standard for the northern districts.

President —It would probably not affect the eating of jaggery, but it might affect the confectionery jaggery?

Mr. Edmonds —I can't say what proportion is used for confectionery. If any considerable proportion of jaggery is used for confectionery and if the price is Rs. 32 I am inclined to think that it would.

President —That, of course, is considerably below your local price for even inferior jaggery?

Mr. Edmonds —Yes, it is. Undoubtedly there is a demand for good quality jaggery, Indian jaggery of good colour (crystalline).

Dr. Matthai —For purely eating purposes?

Mr. Edmonds —Yes. Up to the year 1920 there was very little of this white jaggery made in Vizagapatam. It was all black jaggery. So undoubtedly there is a demand in the market for good quality jaggery.

Dr. Matthai —You don't suggest, as far as your experience goes that white sugar competes with jaggery to any extent. What is your own impression?

Mr. Edmonds —I don't think I can say anything from my own experience.

Dr. Matthai —We had a suggestion made at Coimbatore that as far as towns are concerned, jaggery does come into competition with white sugar, but not in villages.

President —Generally speaking, the demand for white sugar in towns to replace jaggery even with prices levelled would not be such as to affect the price of jaggery in the districts or province as a whole. That is the opinion of the dealers.

Mr. Edmonds —I don't think so.

Dr. Matthai —Apparently the position seems to be even in towns sugar will not replace jaggery, but sugar may replace gur.

Mr. Edmonds —One important point about that is this question of keeping quality.

President —What happens in the rains? The local jaggery won't keep.

Mr. Edmonds —That is the glucose which absorbs moisture.

President —How do people supply themselves with jaggery?

Mr. Edmonds —They smoke it. That destroys the outside colour. They scrape off the surface at the time of use and lose a certain proportion of it in that way.

President —If arrangements could be made to preserve jaggery in good condition it would be very advantageous?

Mr. Edmonds —Yes.

President —Have you seen the terms of reference?

Mr. Edmonds —No. (Copy given for perusal.) May I know the conditions laid down in paragraph 97 of the report of the Indian Fiscal Commission?

President —There are three conditions laid down by the Fiscal Commission. The first is that the industry must have certain natural advantages, as, for instance, plentiful supply of raw material, a large home market and cheap labour and so on. The second condition is that without protection the industry will not develop or will not develop as rapidly as is desirable in the national interests and the third condition is that the industry must be such that in course of time it will be able to stand without protection.

Mr. Edmonds —My general views are that as far as the actual production of cane is concerned and the manufacture of jaggery, it is very inefficient and it responds very slowly to improvements. We have now in these northern districts and elsewhere in the Presidency definite improvements by which we

can not only reduce the cost of cultivation, but raise the output. There is one particular item, namely, the question of cost of seed material. We have been able now, in Viragipuram to grow seed cane on precisely the same plan as they adopt in Java by which we grow a six months crop instead of an 11 months crop.

Dr. Matthai—I am afraid I don't quite follow. What precisely is the point? You grow your seedlings.

Mr. Edmonds—The present method is to grow 10 or 11 months crop.

Dr. Matthai—Right from the beginning?

Mr. Edmonds—Yes. It is used both for sugar and for seed. In Java they raise what they call a short or nursery crop which is a six months crop and it is raised at certain times of the year in which they can get as much if not more weight of stalks.

Dr. Matthai—Then the department grows the nursery crop?

Mr. Edmonds—The ryots are trying to do it. In all these improvements the process is very slow. On the Research Station at Anakapalli over a period of 4 or 5 years we managed to get 15 or 20 per cent increase in the yield of sugar by using this short crop seed material. That is one item. You can also reduce your cost of cultivation appreciably. You don't want bamboos for holding the crop up.

Dr. Matthai—Your canes are taller than in the south?

Mr. Edmonds—Not necessarily. It is subject to damage by cyclones and in these paddy growing areas the clumps have to be held up. There is an all round reduction. I will let you have the actual figures if it would interest you.

Dr. Matthai—It would be interesting to us.

Mr. Edmonds—Yes, I will send you the figures. Another item is bamboos. By improved methods that are easily within the ryot's reach, he can cut down the number of irrigations without detriment to the yield. This means that his crop will not grow so high and that it will require fewer bamboos to hold it up.

Dr. Matthai—What about new varieties of cane? Is there any possibility of reduction in cost in that direction?

Mr. Edmonds—I think so. I can let you have a statement to give a general idea of what is possible in the way of reduction of costs of cultivation which the ryots are adopting. They adopt such improvements very slowly. They recognise that the variety of cane which we are pushing now is a good cane. It is one of these Java canes, J 247, but the process is slow. It has taken about 15 years to get about 8 to 10 per cent of the area in the circle under this variety.

Dr. Matthai—Of the total crop?

Mr. Edmonds—Yes, under this particular variety. It will be very difficult to compete with Java who recently managed to bring over 90 per cent of their area under one variety in the course of four years.

Dr. Matthai—You cannot do very much work in that direction unless you have a factory or two working in that area. The factory is a very good propagating centre.

Mr. Edmonds—Yes, but it is a question of competition. My idea is that we must put our house in order.

President—I gather then your view is that so far as the cultivation of sugarcane is concerned and the profit to be derived from it that we should look rather to improving the varieties of cane and introducing economies in cultivation than to an increase in the price of the product.

Mr. Edmonds—I think so. The ryot is far less likely to listen to what we say regarding reduction of costs if the prices are maintained artificially.

President—I suppose so far as gur is concerned, it is eaten by the poorest classes. We should look really rather to a reduction in the price of gur than an increase.

Mr Edmonds —Yes, we should

Dr Matthai —Are there any economies in the methods of manufacture of gur which you consider possible? Is that part of your work?

Mr Edmonds —The bullock is the limiting factor in the amount of juice which a ryot can get out of his cane

Dr Matthai —Are there any mills in your Circle?

Mr Edmonds —There is a small power mill owned by a private person

President —No satisfactory power mill has been devised so far?

Mr Edmonds —I have no experience of that I have collected a few statistics I think it is mainly a question of the period of working If you can work hullers or disintegrators in conjunction with your milling, then it is a practical proposition as regards getting more juice A 10 per cent increase in extraction is quite possible As far as jaggedly manufacture is concerned, there are other difficulties

Dr Matthai —This particular power mill that you are speaking of, what quantity of cane does it crush?

Mr Edmonds —About $1\frac{1}{2}$ tons an hour Given a reasonably long working period of 250 days, it is undoubtedly possible to reduce one's costs

Dr Matthai —You cannot go up to 250 days?

Mr Edmonds —If you use a pump for lifting water from a well, hullers for breaking up cake for manure and so on, it would be possible to do so

Dr Matthai —Supposing the shipments of this kind of gur that you have seen continue and increase then you would consider that some step should be taken, because if that took place on a very large scale, it might so seriously affect the gur industry that it might not be possible to introduce these improvements

President —The area might decrease considerably

Mr Edmonds —It might be a very slow process

President —But then on the other hand the improvement in sugarcane cultivation also is a very slow process

Mr Edmonds —Yes My impression is that the industry is not stable We have this limiting factor namely, paddy cultivation We grow cane under conditions which tend to keep our cost of production up For example, we cannot except with difficulty get implements through the soil in Godavari mainly owing to paddy cultivation The ryot is struggling undoubtedly under peculiar difficulties when he has to cope with these conditions

President —Do you mean to say that the area is waterlogged?

Mr Edmonds —Yes

President —So that the paddy cultivation is in a sense injurious to sugarcane cultivation?

Mr Edmonds —Very much so That difficulty is removed in Java, because they grow it there on the block system They take the land on lease for a number of years and after they have grown cane they give it back to the cultivator and he cultivates rice

President —Do you mean to say they don't grow cane there?

Mr Edmonds —Not until the rotation comes in

President —That is to say there is no paddy intermingled with sugarcane?

Mr Edmonds —It is on a consolidated block and they can improve the drainage

President —That is a natural disadvantage so far as India is concerned?

Mr Edmonds —It is

Dr Matthai —That is to say where paddy is an alternative crop

Mr Edmonds —Yes

Dr. Matthai — But if you take areas in the United Provinces and the Punjab where the main competing crops are wheat and cotton, this difficulty doesn't arise

Mr. Edmonds — I don't think so. Conditions there are quite different. I don't know much about conditions in the United Provinces.

President — As regards white sugar I suppose you would agree that the white sugar factories perform a very useful function. They form the centres from which improvements in cultivation will develop. For instance, in the farm of Messrs. Parry and Company at Nellikuppam we found that they have been able to introduce improved varieties of cane on a very large scale and the cultivator took their cue from them both as to the variety sown and the time of cutting.

Mr. Edmonds — Undoubtedly.

President — From that point of view it would be of real importance to cane cultivation in India to take steps to ensure that the sugarcane factories in the white sugar areas didn't go under owing to Java competition.

Mr. Edmonds — Yes. I think if we had sugar factories down here, and if the price of sugar was such that the raw material could be obtained, I think undoubtedly it would give a tremendous stimulus to production.

Dr. Matthai — I suppose your opinion is that in the areas with which you are concerned, it would be almost impossible in the near future to ensure continuous supply of sugarcane?

Mr. Edmonds — I think we have to rule it out entirely. All our research work has been done in the present area, in the area where sugarcane is already grown.

Dr. Matthai — Are you familiar at all with the Southern Districts?

Mr. Edmonds — I am afraid I am not.

Dr. Matthai — As far as the problem of large factories is concerned, we may practically rule out all the sugarcane areas in the Madras Presidency.

Mr. Edmonds — Yes. I think the statistics which the Sugar Committee collected show that the largest proportion of the area under cane was on a wet land or paddy land.

Dr. Matthai — That applies not merely to your districts, but also to the southern districts?

Mr. Edmonds — I think so.

President — You say in the main it is a question of power?

Mr. Edmonds — You mean this question of extraction?

President — You were talking about the nature of the soil. Owing to paddy cultivation it is very difficult to turn it up.

Mr. Edmonds — Owing to the lack of drainage you cannot turn the soil frequently without causing deterioration. That accounts for this long rotation. You get rotations varying from 3 to 8 and 10 years. In certain areas that are particularly low lying and where drainage is particularly deficient, you find that the rotation lengthens out.

President — So that it is really a question of rotation?

Mr. Edmonds — The cause indirectly is paddy.

Dr. Matthai — Paddy works really in two ways. There is first the question where paddy is grown on this kind, that land to some extent becomes more difficult from the point of view of the cultivation of cane.

Mr. Edmonds — It does.

Dr. Matthai — That is one thing and the other thing is that the ryot considers paddy a more secure kind of crop, easy to market, easy to cultivate that is to say, partly it is a question of the conditions of cultivation and partly a question of the conditions of marketing. That is the position?

Mr. Edmonds — The Director of Agriculture has collected statistics regarding this question of rice. He has examined the question of the consumption

of rice and he will be able to give you figures. The present position is that rice is becoming far less attractive than it was at the time when the Sugar Committee visited the Presidency.

Dr. Matthai—That would be an argument for pushing sugarcane.

Mr. Edmonds—Yes, if possible.

Dr. Matthai—Looking at this graph of yours, I take it up to a point there is a certain amount of correspondence between acreage and the price of jaggery, but then after about, say, 1925-26 there doesn't seem to be any particular correspondence. Up to about 1925-26 you can trace a certain amount of correspondence.

Mr. Edmonds—There is not much variation in respect of rainfall. I can show you graphs showing the area in relation to the price of Ragi. (Handed in.)

Dr. Matthai—Looking at your graph, the fall in the price of jaggery will not necessarily reduce the acreage under sugarcane. If there are other cash crops, it will depend on whether the fall in the price of jaggery is greater than the fall in the price of these other cash crops. In that case the acreage comes down. But if there are no other cash crops and if the fall in the price of jaggery is such that the ryot is still able to meet his out of pocket expenses, the acreage is not affected.

Mr. Edmonds—I don't think so.

Dr. Matthai—So that really the circumstances that decide the thing is the relative price of jaggery and these other competing crops?

Mr. Edmonds—Yes, but if the figures prior to 1920-21 are examined, you will see that the area for the Madras Presidency bears no relation to the price. In 1919-20 you see a big fall. It has come down to 92,000 acres. Undoubtedly the main factor has been the prices of competitive crops during the last 10 years. The subsidiary factors are firstly the question of water supply which doesn't apply to my districts, and it applies more to South Arcot. Where the water supply is obtained through rock, the underground source is not affected by the local rainfall as it is in northern districts. Secondly, there is this question of rotation. I think a sudden rise in the price of jaggery has a tendency to shorten the duration. I believe that is responsible for these sudden and not altogether accountable falls in areas when prices of jaggery are fairly high.

Dr. Matthai—Supposing the price of jaggery is very high, the ryots take advantage of it by shortening the rotation. Next year he finds that it is impossible to sustain it and then you find a sudden drop.

Mr. Edmonds—It usually takes two years to see the effect of it. In the third year only you will see the effect of it.

Dr. Matthai—There are then three factors, one is the price of competing crops, the other is the rotation of crops and thirdly, the question of water supply?

President—From the graphs and statistics which you have supplied us with, it appears fairly clear that so far as Madras is concerned, the area under sugarcane doesn't depend upon the price of imported white sugar.

Mr. Edmonds—I don't think it does. We might draw up similar graphs for the other competitive crops. As far as I have been able to find out, it is cotton mainly in South Arcot and Chittoor.

Dr. Matthai—Nellikuppam is in South Arcot?

Mr. Edmonds—Yes.

Dr. Matthai—They told us it was paddy and groundnut.

Mr. Edmonds—I wrote to the Deputy Director down there and I suggested to him that it was groundnut.

President—In Coimbatore it was paddy and cotton?

Mr Edmonds—Yes I said it was groundnut in South Arcot and he said, "no"

President—They told us that the area under sugarcane is expected to increase considerably this year, because the price of groundnut has gone down

Mr Edmonds—I think it is very likely If we can get similar statistics for groundnut in relation to the area under sugarcane, you will find it will take much the same course

President—So far as Madras is concerned, your own opinion is that a tariff on imported white sugar would not help sugarcane cultivation in Madras unless the Java manufacturers commenced to import Java sugar on a large scale

Mr Edmonds—Yes

Dr Matthai—How do you account for the variation in the price of rice in recent years?

Mr Edmonds—The Director of Agriculture has enquired into that question and he will be able to give you full information There is the question of Burma and a Trade convention I think it is very unlikely that Burma will be allowed to continue to dump rice in Southern India even if they can grow it under rainfed conditions 10 or 11 per cent of the area under paddy is irrigated, whereas in Madras it is I think about 75 per cent of the area

Dr Matthai—Of course there are areas in India where rice is largely rainfed

Mr Edmonds—Speaking for the Madras Presidency, I think we have about 70 to 75 per cent under irrigation

Dr Matthai—Practically everywhere in Madras excepting the two west coast districts it is irrigated

Mr Edmonds—Yes, but there is a lot of unirrigated paddy grown up in the northern districts

Dr Matthai—When you speak of irrigated paddy, you mean irrigation from tanks?

Mr Edmonds—Yes, apart from purely rainfed

Dr Matthai—May we keep these graphs?

Mr Edmonds—Yes

Dr Matthai—Are there any other statements that you have got which you think might help us?

Mr Edmonds—I might overhaul these rough statements showing the cost of production to give you a general idea

Dr Matthai—That is to say, the cost of production of sugarcane and the cost of production of some competing crops to give us a rough idea of the relative position

Mr Edmonds—Yes

Dr Matthai—If we had the expenses of cultivation of sugarcane and the expenses of manufacturing gur and the price realised by the gur produced from an acre of sugarcane and then compare that with the expenses of cultivation of rice and the price realised, it would give us a rough idea of the relative position

Mr Edmonds—One cannot bring down the cost of cultivation of these millets very much although in the case of sugarcane it is possible to bring them down very appreciably

President—Would you indicate in a short note attached to these costs of cultivation, the chief directions in which costs might be reduced?

Mr Edmonds—Yes I will

**(2) Oral Evidence of Mr C. R. HILSON, Director of Agriculture,
Madras, recorded at Ootacamund on Friday, the 11th
July, 1930.**

President—Mr Hilson, you are the Director of Agriculture, Madras

Mr Hilson—Yes

President—When did you take over charge?

Mr Hilson—I took over charge in September of last year

President—Mr Anstard was your predecessor?

Mr Hilson—Yes

President—Into how many Circles is your Presidency divided?

Mr Hilson—8 Circles at the moment

President—Each with a Deputy Director in charge?

Mr Hilson—Yes

President—Which are the most important Circles from the point of view of sugarcane?

Mr Hilson—I and IV

President—Which are they?

Mr Hilson—Ist Circle—Ganjam, Vizagapatam and Godavari IVth Circle—Chingleput, North Arcot, South Arcot and Chittoor

President—In what Circle does Coimbatore lie?

Mr Hilson—In VIIIth Circle That is also important from the point of view of sugarcane (Handed in statement showing the area under cultivation in each District)

Dr Matthai—What precisely is the difference you make between normal and actual yield?

Mr Hilson—The normal yield is more or less the average yield we get in any one district and that is taken as the sort of yield you expect to get each year to which you apply your condition factor

President—How is that normal yield worked out?

Mr Hilson—The figure that has been arrived at for most of the crops in normal yield is based partly on crop cutting experiments and partly on hearsay and information from various sources

President—When was the normal yield of sugarcane last determined? Have you maintained the same figure for a number of years?

Mr Hilson—I think so I have never actually looked into that fact

President—It was probably originally based on crop cutting experiments carried out by Collectors perhaps before 1900 or 1910

Dr Matthai—Crop cutting experiments and local investigations check results

Mr Hilson—Yes, that is more or less the procedure Then for a time we also did crop cutting experiments From 1910 onwards for a few years we were doing cutting experiments on various crops and sugarcane was one of them

President—So far as present conditions are concerned, one must not put too much reliance on these normal figures?

Mr Hilson—No

President—How is your acreage under sugarcane determined? Is that determined by the Land Records Department?

Mr Hilson—We get returns from the Revenue Department

President—Perhaps I might explain In my own province the Revenue Department works thus the lowest authority is the Patwari, then come the Revenue Inspector, then Superintendent of Land Records who works

both under the Deputy Commissioner and Director of Land Records and then the Director of the Land Records. The area is reported through the various authorities. Finally, the total figures for the province are published by the Director of Land Records. Is there some similar system here?

Mr. Hilson—Here the karnam is the Village Accountant with a Revenue Inspector above him, with a Tahsildar above him and then the Assistant Collector or Collector. We get the returns from the Collector or from the Tahsildar.

President—Then the Director of Land Records is not responsible here for the publication of acreage in Crop Reports?

Mr. Hilson—I don't know whether that is a fact in every case or not. For the important crops the Director of Agriculture is responsible.

President—The first Linseed Report in our province is signed by the Director of Land Records. Here it would be signed by the Director of Agriculture and you get the information from the Revenue authorities?

Mr. Hilson—Yes, and also we check that to a certain extent in a mild sort of way by the members of the Agricultural Department.

President—The acreage figures can be taken as approximately accurate?

Mr. Hilson—Yes, as far as acreage figures are concerned.

President—After you have applied the normal figure of yield to the acreage, how do you determine the yield for a particular area? I mean there is some factor which is applied corresponding to the crop prospects of the area?

Mr. Hilson—The Revenue Inspector in preparing his statement is supposed to say that so many acres in such and such a village would yield 8 anna crop or 12 anna crop or whatever it may be. From that an average figure is worked out.

President—It is reported by annas in the rupee and not by American notation. You don't use the American notation?

Mr. Hilson—I am afraid I don't know what it is.

President—It is a percentage taking a hundred instead of taking your 16 anna crop.

Mr. Hilson—Right up to the point where we worked out the average figure for a district, we start off with anna figures and eventually the average for the whole Presidency is worked out. That has to be as a percentage.

President—But the various Revenue Inspectors' Reports are correlated by the Tahsildar and they finally come up to the Collector who frames his own judgment as to the anna output for the whole of his district and for each district the anna output comes up to the Director of Agriculture and then he makes some sort of rough estimate as to the outturn for the whole province. Is that correct?

Mr. Hilson—That is more or less the procedure. I don't know how much the Collector worries about it.

President—How is that figure actually applied? Supposing the normal output for sugarcane is 100 and the crop is 12 anna crop, you simply take $\frac{1}{8}$ th of 100.

Mr. Hilson—Yes. I think we have already prepared a note on the procedure followed in regard to crop estimates and so on. I don't know whether we sent a copy to you.

Dr. Matthai—We should like to see it.

Mr. Hilson—The American Authorities asked for information how we are doing it. The Statistical Assistant who deals with this has prepared a note and I will send you a copy of that note.

President—So far as I understand from what you have just told us the present estimate of outturn would not make allowance for any improved kind of cane introduced during the last ten years.

Mr. Hilson — Not until it was realised that the area under the improved kind of cane was pretty considerable and then a definite change would be made. The thing would be gone into and then we would make a change.

Dr. Matthai — At present the production of improved canes at Coimbatore is not practically of great importance in the Madras Presidency, because Coimbatore canes are generally meant for Northern India.

Mr. Hilson — As far as Coimbatore canes are concerned, they are only just beginning to get canes from the sugarcane breeding station. It would be useful for the Madras Presidency.

Dr. Matthai — But I suppose your officers are always making their own experiments.

Mr. Hilson — Since I have been in the Department, we have been getting canes from West Indies or Java or anywhere else practically.

Dr. Matthai — Have they made a big difference? Have any of your imported canes meant a big improvement in yield over the previous canes in use?

Mr. Hilson — J 217 in the 1st Circle.

Dr. Matthai — That is Java cane.

Mr. Hilson — Yes. I tested it along with several other varieties years ago and started putting it out.

Dr. Matthai — Is it in the Coimbatore area?

Mr. Hilson — It is in the Vizagapatam area.

Dr. Matthai — There is just one little point. In preparing these figures about jaggery, do you generally make allowance for the quality used for chewing purposes and for planting purposes?

Mr. Hilson — You mean in regard to estimating the yield?

Dr. Matthai — Yes. When you work out the estimate of the yield of jaggery for the Presidency from year to year, do you make a special allowance for the quantity of sugarcane that would be consumed for chewing purposes?

Mr. Hilson — I should think it is extremely likely.

Dr. Matthai — It is a point that could be verified.

Mr. Hilson — Yes.

Dr. Matthai — It is rather an important factor, because we find from some of the papers that it would be necessary to make allowance to the extent of 17 to 20 per cent. If allowance is not made for that, it might make rather a considerable difference. If you could kindly verify that point and write to us, we should be much obliged.

Mr. Hilson — Yes.

President — To what extent is sugarcane a cash crop in this province, that is to say a crop on which the agriculturists rely for raising the cash required to pay the rent, to buy cloth and so on?

Mr. Hilson — You mean so far as the sugarcane crop is concerned?

President — Yes.

Mr. Hilson — That practically applies all through.

President — Are there any other cash crops competing with it?

Mr. Hilson — The main crops in the Presidency are sugarcane, cotton and groundnuts.

President — What about paddy?

Mr. Hilson — One doesn't look upon that as a cash crop.

President — Why not?

Mr. Hilson — To a very large extent it is not and to a very large extent it is the only crop.

President — A certain amount of paddy is exported. The cultivator doesn't consume all the paddy.

Dr. Matthai—Take an area like the 1st Circle. I suppose a good deal of the rice grown there would be exported to other parts of the Presidency.

Mr. Hilson—I would like very much to know exactly what happens to the rice in the Presidency. Since the Railborne Trade Returns were stopped, we haven't got the information. There is certainly a movement of paddy about the Presidency.

Dr. Matthai—If there is a movement to that extent in parts of the Presidency at any rate paddy might serve as a cash crop. That is to say, the kind of problem we are trying to consider is, supposing there is a rise in the price of paddy, then a person who grows just enough for his own use and for his family's use might think it worth while from the point of view of profit to make a surplus for sale. Then he might realise some cash out of his paddy with which he could meet his money obligations.

Mr. Hilson—It is much more often the case. If he grows paddy, he puts the whole of his land under paddy and grows nothing else except perhaps gingelly or some other crops in rotation.

Dr. Matthai—What does he do with paddy?

Mr. Hilson—He sells some of it.

Dr. Matthai—To that extent it must be a cash crop.

Mr. Hilson—Yes. To that extent every crop is a cash crop.

President—Perhaps not every crop. What we are trying to ascertain really is what is the best crop for the cultivator to plant in order to provide himself with the money required to meet his expenses.

Mr. Hilson—Yes.

President—He has to determine having regard to climatic conditions his land and so on what is the best crop to put down. Sugarcane is certainly one of them and what we want to ascertain is to what extent in different parts of Madras other crops serve the purpose of sugarcane in this respect? I gather that the crops would be according to different parts cotton, groundnut and possibly paddy in some places.

Mr. Hilson—Paddy is a limiting factor certainly in the growing of sugarcane, but I have never looked at it as a limiting factor from the point of view of cash. It is never hoped that rice will ever give so large a return as sugarcane.

President—Take for example this case. My recollection is about 1920 in my part of India rice was selling at about 5 seers a rupee or 10 lbs a rupee. Now I understand that it sells in Madras at 30 lbs per rupee. Supposing that the price of rice again rose to 10 lbs a rupee, would it then form a serious competitor with sugarcane?

Mr. Hilson—Yes, because as long as a cultivator can make a certain amount of money out of a crop which is easy to grow as paddy which is such a lazy crop he would certainly grow it and not bother about anything else.

President—We have been reading your interesting note on paddy cultivation in Madras and we gather that at present prices at any rate paddy does not form any serious competitor to sugarcane.

Mr. Hilson—No, I don't think so.

President—At what price do you think that the profits from paddy cultivation would compare at all with sugarcane?

Mr. Hilson—It is a question not only of price but it is also a question of the possibility of growing a crop of sugarcane under the condition as it will prevail with paddy growing there.

President—Assuming you have an area which is suitable for sugarcane I take it that you can substitute paddy for it.

Mr Hilson—Yes, I could. The best instance of what is likely to happen is the figures in Bellary. There most of the sugarcane is grown along the Tungabadhra.

President—In Bellary the acreage has gone down since 1924 considerably. Is that due to substitution of paddy?

Mr Hilson—I don't know exactly. It will have to be enquired into. Along the Tungabadhra there has been for years a regular rotation paddy-sugarcane, paddy-sugarcane. They can grow both.

Dr Matthai—You mean they do it quite regularly.

Mr Hilson—Yes.

Dr Matthai—That is to say in alternate years.

Mr Hilson—Yes, or 2 years paddy and one year sugarcane.

President—Supposing they gave up sugarcane, what other rotation could they have?

Mr Hilson—Nothing.

President—So far as this area at any rate is concerned owing to the necessity of rotation the area under sugarcane there with perhaps slight variations from year to year will remain constant.

Mr Hilson—It is not so much a question of necessity of rotation. They can wipe out the whole quantity of sugarcane and grow paddy.

President—But paddy would not be quite so good a crop as sugarcane.

Mr Hilson—It would depend entirely on what they did. If they grew green manure or put down a manure crop, they could get a good crop.

President—Provided they adopted suitable manures.

Mr Hilson—Yes.

President—If the price of paddy was high enough it might be a serious competitor.

Mr Hilson—The price of paddy has been high in all these years and still sugarcane is growing there.

President—The price of sugarcane was also high in these years.

Mr Hilson—Yes.

Dr Matthai—Taking the position of the Presidency as a whole what particularly interested us in your note is this. You remember when the Sugar Committee reported in 1920, they practically ruled out Madras as a centre for any considerable extension of sugarcane on the ground that paddy had a strong hold on the Madras cultivator.

Mr Hilson—Yes.

Dr Matthai—Therefore they thought that it was not likely that sugarcane would ever acquire a hold to anything like that extent on the rayat. The real reason why paddy is such a favourite crop in Madras is that it is partly a less difficult crop to raise and partly they could depend about ten years ago upon a steady profit from it. Now it seems to me your note is throwing a new light on the problem. The price of paddy is steadily declining and it is becoming less and less profitable. If that is so, it looks to me the position has altered since the Sugar Committee reported in 1920 in the Madras Presidency.

Mr Hilson—Yes.

Dr Matthai—That is to say if paddy is a less profitable crop now than it was ten years ago, the rayat may not realise it to-day but is bound to realise in course of time that he would be put to loss if he continued cultivating more and more of paddy, so that his attention would be diverted to the possibility of other crops and you yourself mention in your note that sugarcane is one of the possibilities.

Mr Hilson—Yes.

Dr. Matthai—Therefore from that point of view it looks to me that we may now begin to consider Madras also as a possible centre for further extension of sugarcane.

Mr. Hilson—Yes.

Dr. Matthai—That is a position with which you would agree?

Mr. Hilson—Yes.

Dr. Matthai—Once you admit that.

Mr. Hilson—I would have disagreed with the Sugar Committee long ago.

Dr. Matthai—Would you have disagreed with the Sugar Committee ten years ago?

Mr. Hilson—I would have disagreed 11 years ago as far as that is concerned. I started pointing out in 1917 that in an irrigation scheme paddy was not the only crop that could be grown.

Dr. Matthai—If you would have disagreed 16 years ago, you would do so very much more now.

Mr. Hilson—It is a heaven-sent opportunity for getting these cultivators on to a decent system of agriculture.

Dr. Matthai—From our point of view the problem is this. We are primarily concerned with the question of white sugar. We are asked to consider whether it is possible to protect the Indian white sugar industry against Java. Now in Madras we are importing I believe about 90,000 tons of white sugar—say about 100,000 tons. If we decide to raise that amount of white sugar in course of time in Madras itself, taking the average yield at $1\frac{1}{2}$ tons of white sugar per acre, you could hope to put about 75,000 acres under sugarcane.

Mr. Hilson—Yes.

Dr. Matthai—That might be some solution of the problem that you are raising in your note.

Mr. Hilson—Yes.

Dr. Matthai—Therefore supposing this Board recommended that the white sugar industry in India should be protected, should be given adequate protection for a reasonable period, say ten years or fifteen years so that the man who puts his capital in the business might have some sense of security, that would be a good thing for the Madras Presidency in view of the present position of paddy. Supposing I put the problem in that way, would you agree?

Mr. Hilson—Yes, if it is possible to get the cultivator to hand over his cane for the manufacture of white sugar. They are doing that in South Arcot.

Dr. Matthai—They are doing that in South Arcot in Nellikuppam where they have arrangements of long leases. Supposing the white sugar industry was definitely protected by Government for a period of 10 or 15 years, then big firms like Parrys who have capital would be prepared to start factories and would be prepared to pay a reasonable price for the sugarcane supplied by the raiyat.

Mr. Hilson—Really speaking this is a point which you can ask Messrs Parry and Company, when you meet them if you have not already met them. The same firm (Parry and Company) during the war when prices of sugar were high—for the second time if not the third time—opened up the factory they had at Annakapalle but the trouble they found was that they were not getting the cane.

Dr. Matthai—I understand that. Assuming your position in this note is correct that the raiyat is going to find hereafter that the paddy crop yields him very little profit then it looks to me he is bound to realise that it is more to his interest to put his land under sugarcane.

Mr. Hilson—Yes.

Dr. Matthai —If there is some possibility of somebody taking up his sugarcane at a fairly reasonable price

Mr. Hilson —It is all right up to the point that he is going to find it more profitable to put his land under sugarcane but the point after that is whether his cane is going to be sent to the factory making white sugar or to the factory making gur

Dr. Matthai —That is a point we have got to consider. Let me take the question of jaggery. We have been furnished with figures of the production of jaggery in different provinces in India. Now it looks to me that the Madras production is very small compared with some other provinces. In Madras in 1928-29 the total production of jaggery is about 240,000 tons of jaggery. We met some dealers in Coimbatore. We had also a talk with Mr. Edmonds, and we were told that a considerable part of the jaggery made in Coimbatore and in the northern districts was being exported from Madras to other provinces. It would appear therefore that the total consumption of jaggery in the Madras Presidency might be even less than the figures here.

Mr. Hilson —I do not know what is imported.

Dr. Matthai —Have you any figures?

Mr. Hilson —No, that is the whole trouble.

Dr. Matthai —It looks to me that it is not likely that any large amount of jaggery from provinces like the Punjab and the United Provinces where they raise a very considerable quantity of gur would be imported into Madras because the freight is considerable. Taking this figure of 240,000 tons as probably the consumption of the Madras Presidency it works out to an average consumption of somewhere about 7 lbs. per head of jaggery. The average in India must be above 20 lbs. If that is so it is probable your Madras man is consuming much less jaggery—much less sugar stuff than the rest of India.

Mr. Hilson —Yes.

Dr. Matthai —The explanation that we want to suggest to you for your consideration is—you might rebut it if you like—there is so little of sugar cane under cultivation and so little of jaggery produced that the price of jaggery is standing higher in Madras than in most other parts of India. Therefore not merely from the point of view of paddy but from the point of view of the consumption of sugar stuff in this Presidency it seems to be worth while for the Government of Madras to encourage the extension of sugarcane.

Mr. Hilson —Yes.

Dr. Matthai —I want to know what your opinion is on that statement of the position.

Mr. Hilson —I think one needs to know a lot more about the movement of jaggery in and out of the Presidency.

Dr. Matthai —This is a fact. It is the United Provinces, Bihar and the Punjab which are the main gur producing provinces of India. It seems to me rather unlikely that jaggery would come all the way to Madras from those provinces and from the figures of jaggery prices that we have seen in Coimbatore and elsewhere it appears that the jaggery prices are rather higher in Madras than elsewhere. They seem to indicate that probably the consumption of jaggery in the Madras Presidency is very considerably limited by the factor of price. If you want to solve the situation you have got to encourage the supply of jaggery.

Mr. Hilson —Yes.

Dr. Matthai —Therefore I suggest to you that the Madras Government ought to encourage the extension of sugarcane.

Mr. Hilson —Yes.

Dr. Matthai —I am putting that point to you because—I suppose this was before your time, before you became the principal agricultural adviser.

to the Government of Madras—when the Government of India circularised the provincial Governments about this question of encouraging the sugar industry, the Government of Madras wrote to the Government of India to say that they were satisfied with the present position and that they did not want any considerable extension. I want to suggest to you in the light of your note on paddy and in the light of this other fact about jaggery that probably the position now is somewhat different.

Mr. Hilson—I do not know what data they were working on when they said that they were satisfied with the position. But from my point of view, from the point of view of the farmer I should like to see very much more sugarcane grown in the Presidency than at the present time.

Dr. Matthai—That is interesting.

Mr. Hilson—I should like to see not only more sugarcane grown but I should like to see the cultivator more generally growing the cane for the purpose of supplying it to a factory—may be a small factory for extracting the juice and converting it into jaggery or a bigger factory for making white sugar. But I should like to see the cultivator growing the cane to sell as cane.

Dr. Matthai—To sell as cane either to a white sugar factory or to a jaggery manufacturer.

Mr. Hilson—Yes. My reasons are two fold. One is that the establishment of a large number of small jaggery manufactories would provide employment—and the establishment of bigger factories for making white sugar would also provide employment—and the other is that when the cultivator sells his cane he gets an enormous amount of organic matter in the form of leaf and trash left behind which can be converted into perfectly satisfactory cattle manure to provide organic matter to keep up the fertility of the soil. It is one of the best crops that there is for producing litter. I have recently been to Palur near Nellikuppam where I saw large areas of cleared land from which the trash was being carted for thatching purposes or fuel or was being burnt on the spot.

Dr. Matthai—Palur is in South Arcot.

Mr. Hilson—Yes near Nellikuppam.

Dr. Matthai—Taking this point about factories for the time being, assuming that it is desirable to have one or more additional factories for white sugar in Madras, what would be your opinion as to the possible areas in the Presidency where an attempt might be made to organise more factories for making white sugar?

Mr. Hilson—Apart from those little spots at Nellikuppam you are up against the other possibility of the cane being used for conversion into jaggery.

President—We were told in Coimbatore that there was practically no possibility of establishing a factory for making white sugar there because the grower would grow sugarcane for making it into jaggery and there is great difficulty in securing constant supplies.

Mr. Hilson—Are not there the remnants of a factory that never really got going at Podanur?

Dr. Matthai—It is still not going. It is rather a good plant which is lying idle.

Mr. Hilson—That is the difficulty. I know perfectly well the trouble that the factory authorities at Samalkot had. They were continually complaining about the fact that such and such a raiyat who had contracted to supply them with cane got his cane crushed and converted into jaggery and sold it because he was tempted by the high price of jaggery and left them, they having supplied the money in advance, in difficulties. They had quite a lot of trouble and they had to go to the court to recover the money and there is yet quite a lot of unreturned advance.

Dr Matthai — Supposing for a moment the position was this The Government of India decided to protect the Sugar industry that is to say, they fixed a certain measure of protection and gave it by means of a tariff In determining the measure of protection they take into account the fact that the cane is bought at a price which would be reasonable to the raiyat, that is to say, at a price which would compare satisfactorily with the price of jaggery Supposing the measure of protection was based on that, then the position would be a different one from what it has been Take for example the Nellikuppam area There Parrys are buying sugarcane from the raiyats in addition to their own cane Supposing we decided to fix the duty on sugar in such a way that Parry's would be able to make a fair profit after allowing for this price for sugarcane then it won't be quite so difficult to get the necessary supply of cane from the raiyat

Mr Hilson — It should not be as long as the prices fixed compare favourably to the relative price of cane if used for manufacturing jaggery

President — That raises another point So far as you are aware, is there any relation between the price of jaggery and white sugar?

Mr Hilson — I am doubtful I have not looked into the position closely enough to say that but from my recollection of all previous examination of it there does not seem to be any

President — So far as we can see, at Coimbatore, for instance, the price of jaggery was fairly constant till about three years ago, then it fell but now it is rising again although in those particular years the price of white sugar has been falling steadily year by year

Mr Hilson — Yes, that is the whole difficulty Are you going to put such a tariff that it is going to be possible to pay the cultivator for his cane on the jaggery basis?

Dr Matthai — My answer to that question would be this If you decided to put more land under cane in this Presidency then the increased supply of jaggery would bring down the price of jaggery to some extent in this Presidency, so that the competitive price of sugarcane would come down and therefore the price that a big factory would have to pay for cane would be lower than now because the price of jaggery would have come down

Mr Hilson — In other words you would put a tariff on and leave it to the other economic factors The price of paddy, for instance, having fallen, it would cause an increase in the area under sugarcane which is now mainly used for the manufacture of jaggery and an increase in the supply of jaggery to bring down the price of jaggery and then you get to a point where it is possible to get the cultivator to agree to hand over his cane to the factory for making sugar

Dr Matthai — Yes The real reason why factories in Northern India are finding less difficulty in getting sugarcane is that the price of jaggery in relation to white sugar is not quite so high as in Madras Therefore, if we can increase the supply of jaggery in this Presidency possibly one difficulty in the way of working a sugar factory may be removed There is another point which is more important from a practical point of view on which I would like to have your views The question of getting a continuous supply of sugarcane is a vital question in regard to white sugar If you don't get your supply of sugarcane in time then obviously the working of the factory is interrupted and the costs go up One element is the price and the other question is, would it be possible for the factory if a new factory is started in the Madras Presidency, to arrange the kind of long term leases which Nellikuppam has been able to arrange? They have got leases with practically all the surrounding people in that area Suppose a factory was started in some new area, would it be exceedingly difficult to get that kind of arrangement made?

Mr Hilson — I don't know

President—I presume it would be necessary for the factory to take over and cultivate some area as a condition precedent to arranging for contracts for cane?

Mr. Hilson—They would have to do so for their own sake in order to ensure a definite supply of sugarcane.

President—We were told at Nellikuppam that their factory had some thousands of acres of land under cultivation to set an example to the sugarcane cultivator so to speak. As soon as they started cutting their own cane, the cultivator followed suit so that they got their sugarcane cut in proper time which the cultivator does not always do. In the same way in planting certain varieties of cane as soon as the cultivators found that a certain variety of cane had proved a success on the factory land they took the cue from them. So that it seems essential that a factory should have certain areas under their own cultivation to ensure at any rate a portion of its supply.

Mr. Hilson—Yes.

President—So that from that point of view the first question to be determined is whether there are any centres in Madras where it is possible for factories to obtain suitable areas.

Mr. Hilson—I think for a time Parrys leased some lands up in Viragapatam and grew some sugarcane themselves.

Dr. Matthai—They were not able to get all the sugarcane they wanted?

Mr. Hilson—No. There was always the price of jaggery and the cultivators defaulting.

Dr. Matthai—For the moment you would not care to make any suggestion as to whether, if a new factory were to be started in the Madras Presidency, there are any particular areas where an attempt can be made?

Mr. Hilson—I think you should be limited by the areas where there is sugarcane under cultivation now, viz., the 4th and 8th circles.

Dr. Matthai—We were told at Nellikuppam one reason why they succeeded in making these long arrangements was that they took up first of all lands so dry that the cultivator made little profit on it. Therefore it was less difficult for them to persuade the raiyat to let these lands on long lease. It seems to me therefore that if you are going to make that kind of arrangement the kind of area you would have to tackle would have to be a dry area which the factory could gradually develop by means of wells, pumps, etc. From a practical point of view it might be easier to start that way.

Mr. Hilson—Yes, it might be. Still I don't know that it is altogether impossible to get leases of land in areas that are now already growing either paddy or garden crops.

Dr. Matthai—If the position of paddy is going to be less and less profitable it may not be so difficult.

Mr. Hilson—No. This sort of thing you cannot actually get definite information on until you go round and are prepared to take leases.

President—In 1917 you recommended the growing of sugarcane rather than of paddy?

Mr. Hilson—Yes.

President—Would you say that the cultivation of sugarcane is the most profitable source of cultivation in the irrigation area?

Mr. Hilson—Not most profitable but it is distinctly profitable.

President—More profitable than paddy?

Mr. Hilson—Yes.

President—It was more profitable than paddy in 1917?

Mr. Hilson—Certainly.

President—Could you give us some sort of estimate of the cost of sugarcane cultivation?

Mr. Hilson—That is a question which I think you had better ask Mr. Edmonds. He has been growing sugarcane for a number of years.

Dr. Matthai—We asked Mr. Edmonds for costs in his area and probably he would send us some figures but it might be rather useful to us if you could ask one officer in every sugarcane area to give us some costs of sugarcane. Take the Coimbatore area or South Arcot or both if you like and give us some kind of representative cost of cultivating sugarcane.

Mr. Hilson—I could get the cost of cultivating sugarcane at Coimbatore, and Pallur.

President—Can you give us similar costs for cultivating paddy?

Dr. Matthai—The four important alternative crops that you mention in your note are paddy, sugarcane, groundnut and Cambodia. What we should like to get is some figures which at present prices of these crops would show the relative profits. That is to say, you take each of these crops and say approximately so and so are the representative costs of cultivation of each at present rates these are the prices you can realise and therefore the approximate profit in each case will be so much. We want some rough figures to indicate the relative profits in the case of four important crops. Would it be possible for you to give some statement that would enlighten us on that point?

Mr. Hilson—I think it would be possible to do that.

President—The Imperial Council of Agricultural Research in their representation to the Government of India asking for protection for the sugar industry laid considerable stress on the variations in the area under sugarcane from year to year and they attempted to relate these variations to some extent to the price of imported white sugar. Could you give us, so far as the Madras Presidency is concerned, the reasons for the variation in the area from year to year. For example, the statement supplied by the Imperial Council of Agricultural Research show that the area in 1928-29 fell by about 20,000 acres in Madras. That is a substantial fall. Was there any special reason for this particular fall? In 1927-28 it was 106,000, it was 114,000 the year before and then there was a sudden drop in 1928-29 to 80,000 acres.

Mr. Hilson—The year before the price was low and that is the reason for a drop in the area under cultivation the following year.

President—And the year before you had 106,000 acres?

Mr. Hilson—Yes, instead of 114,000. In 1927-28 there was scarcity of water. What I found years ago in the Godavari district was that if the price of jaggery was good this year the area went up next year. But since then as far as that area is concerned another factor has come into play and that is water, whether they can get water or not from the irrigation scheme is an important factor.

Dr. Matthai—Can you tell us from your figures where the drop really occurred in the Madras Presidency in 1928-29?

Mr. Hilson—There was a small drop in West Godavari, a bigger drop in Bellary, all from nearly 9,000 to 7,000. The drop as a matter of fact has been pretty well throughout except in South Canara and in Vizagapatam which remained steady.

Dr. Matthai—So that excepting in Vizagapatam and South Canara which is not very important, in every other area there is a big drop.

Mr. Hilson—Yes.

Dr. Matthai—What was the total area under cultivation of cane in 1928-29 in Vizagapatam?

Mr. Hilson—36,182 acres.

Dr. Matthai—And in the year previous?

Mr. Hilson—36,605.

President—This was partly due to want of water apparently?

Mr. Hilson — That is the note they have against that item in my statements here

President — One of the merchants at Coimbatore who supplied us with jaggery prices said that in 1926 the price was Rs 17 per pothu and in 1927 it was Rs 15, which is a very low price, and in 1928-29 it jumped up to Rs 23. Now it is Rs 22. So that it is possible that the low price of jaggery might to some extent have affected the area under cultivation.

Mr. Hilson — I should say so.

Dr. Matthai — The low price in 1927 might be due to a very good crop in 1926 or 1925, so that it is likely that according to climatic conditions the price of jaggery might rise or fall and the areas in succeeding years might also rise or fall.

Mr. Hilson — Yes, it is possible. I think if you got the prices of jaggery from year to year and make a graph of your areas you would probably find that the acreage was lower when the price of jaggery was less in the previous year.

President — Have you got jaggery prices?

Mr. Hilson — That is a case where somebody else takes a hand. We have got figures from the Director of Industries (handed in).

Dr. Matthai — He has not got any staff, has he?

Mr. Hilson — I don't know how he gets the figures. The trouble I find about these figures is that they have perhaps mixed them up with palmyra jaggery.

President — From these figures it appears that you passed through a period of slump in 1926-27 and now you have got back practically to the original figures.

Dr. Matthai — I suppose the palmyra jaggery question would only apply to Tinnevely to any considerable extent.

Mr. Hilson — Yes and also Godavari, Kistna and Guntur.

Dr. Matthai — In Tinnevely the price of *gur* was very low.

Mr. Hilson — Yes, Rs 4-11-0.

President — In other places it varies from Rs 6 to Rs 11 per maund.

Mr. Hilson — Yes.

Dr. Matthai — How did the Industries Department get these figures? Did they get them from the Revenue Department?

Mr. Hilson — I don't know.

President — Is there a market for palmyra jaggery in Cocanada? The price is Rs 2-8-8 per maund.

Mr. Hilson — There is the Deccan Sugar Company at Samalkote. They used to get quite a lot of palmyra jaggery.

President — We might disregard this figure of Rs 2-8-8. I have never heard of jaggery selling at that price.

Mr. Hilson — I would certainly take it with a large pinch of salt. The uplands of Guntur, Kistna and Godavari are big palmyra areas. In West Godavari there is certainly a definite palmyra jaggery industry.

President — What was the acreage under sugarcane in 1925 in the Madras Presidency?

Mr. Hilson — The acreage is given in the statement I handed over.

President — Do you know the outturn?

Mr. Hilson — That is in the graph. For the presidency as a whole in 1925-26 it is about 113,000.

President — With an outturn of 315,860.

Mr. Hilson — Yes.

President — The outturn was approximately normal, just under 3 tons an acre.

Mr. Hilson — Yes

President — There is nothing in the outturn in Madras to account for the sudden fall in the price in succeeding years. I quite understand that in 1925 you had a bumper crop and you put in the market all the jaggery at a very cheap price. All the jaggery area might have declined afterwards.

Mr. Hilson — As a matter of fact it went up in the next year a little bit.

President — I can find no reason why the price of jaggery declined so much in 1926-27 both in this statement and in the prices we were supplied. We said that the price went down very much in 1926-27.

Dr. Matthai — I think that might be due to the demand from Bombay falling off. What is the position in Coimbatore in that year?

Mr. Hilson — In 1924-25 it was practically 9,000, in 1925-26, 9,600 and in 1926-27 it was 10,000. There is a gradual rise.

Dr. Matthai — It must be that the demand fell off.

Mr. Hilson — In 1925-26 you have got a rise over 1924-25. The rise has continued in 1926-27, so that if the demand had fallen off in 1926 and consequently the price was lowered, one would have thought that it would have affected the area, but the area has gone up in 1926-27.

President — Speaking generally from this statement it appears that the price of jaggery has remained fairly constant during the last six years and doesn't appear to have been affected by the import of white sugar.

Mr. Hilson — Yes.

President — Are you the proper authority to refer to as regards the cost of manufacturing jaggery or are we refer to the Director of Industries?

Mr. Hilson — We would only have figures for the ordinary bullock mill. He would have figures for power mill or he might have both.

President — You could supply us with figures as far as the bullock mill is concerned.

Mr. Hilson — Yes, we could give you the cost of manufacturing jaggery using bullock mill.

President — Is it not the opinion of the Department that the methods of manufacturing jaggery are wasteful? That is to say more efficient methods can be devised.

Mr. Hilson — Yes.

President — What percentage of juice is lost in the ordinary bullock mill? Could you give us any sort of estimate?

Mr. Hilson — I am afraid I can't give you figures which will really be worth relying on.

Dr. Matthai — Has there been any research on methods of manufacturing jaggery done by the Agricultural Department? Have any of your men ever been engaged in research work on that?

Mr. Hilson — When we had the Pumping and Boiling Section which is now under the Director of Industries, we had a small power plant fixed up at Hospet and it was run for a time.

Dr. Matthai — That is now run by the Director of Industries.

Mr. Hilson — Yes.

Dr. Matthai — I suppose it would be best for us to approach him for figures regarding power mills.

Mr. Hilson — Yes. We are mainly concerned with getting all the satisfactory bullock driven mills.

President — What is the outturn of jaggery per acre driven by bullock mills?

Mr. Hilson — Our figures that you have got on the research stations are from bullock mills except perhaps Palur.

Dr. Matthai — Do you show it here?

Mr. Hilson —No, I don't think so About 16 candies of 500 lbs per acre

Dr. Matthai —That is roughly $3\frac{1}{2}$ tons per acre

Mr. Hilson —I can give you definite figures later

President —The outturn is considerably higher in Madras than in Northern India

Mr. Hilson —Yes

Dr. Matthai —What is that due to? Is it the kind of cane?

Mr. Hilson —You mean the yield per acre?

Dr. Matthai —Yes

Mr. Hilson —We have got a sugarcane country We can grow thick canes That is the main reason

Dr. Matthai —You get a much larger yield of cane per acre

Mr. Hilson —Yes

President —It is not so much the sucrose content as the size

Mr. Hilson —I am not very well acquainted with the sucrose content in thin canes The main reason is the actual yield of stuff per acre

President —What is the normal yield per acre in tons?

Mr. Hilson —I am only speaking from memory It is about 30 tons

President —That is about equal to what the Coimbatore Research Station claim that they can get from their improved canes

Mr. Hilson —Yes, 30 tons

Dr. Matthai —The highest yield of gum per acre is in Madras and Bombay and in both cases they are tropical areas

Mr. Hilson —Yes

President —Have you seen our terms of reference?

Mr. Hilson —No

President —Here is a copy of the terms of reference (handed in) Have you any general observations to offer on the question I mean your own personal views on the subject under enquiry For instance do you consider that the case for protection will be established for the Sugar Industry and if so what the general lines of protection you consider would be suitable to the industry in the Madras province?

Mr. Hilson —I don't think there is really a case as far as jaggery is concerned

President —Not as far as jaggery is concerned

Mr. Hilson —Yes

President —Do you consider that anything we do in the way of tariffs will affect the price of jaggery and consequently the area under sugarcane so far as that depends on jaggery manufacture?

Mr. Hilson —My feeling about it is that the cost of production of sugarcane and the manufacture of the raw material into jaggery is capable of reduction

President —That is, the line of investigation in your opinion should be rather towards improving the outturn of cane and introducing improved methods of manufacturing jaggery rather than introducing any sort of artificial stimulus by way of tariffs

Mr. Hilson —Yes and the cost of cultivation of cane itself is capable of reduction There the chief factor militating against the reduction in cost is the growing of paddy alongside of it

President —In what directions is the cost of cultivation capable of reduction?

Mr. Hilson —In the amount of irrigation that you have to give For example if you are lifting more water for irrigation the probabilities are

too much water is being given. Consequently more money is being spent on water than is necessary and then owing to the fact that you have got paddy alongside cane in very many cases you cannot cultivate the land with bullocks and implements, because there is too much moisture in the soil. Therefore you have to depend on hand labour and manuties and spend money in digging trenches by hand. Another thing is that the water table is fairly high and the plant cannot get a good foothold and in an area where it is liable to heavy winds arising on occasions, the crop is blown down and consequently you have got to prop it up with bamboos. That is a distinct expense.

Dr. Matthai—The question of having bamboos is a problem which arises only in the northern districts.

Mr. Hilson—The cultivators in the neighbourhood of Hospet and in the area where they grow sugarcane and rice in rotation have not in the past propped the cane up by bamboos, but they are now talking about doing it. There the trouble is that they are using too much water.

President—Then as regards yield, are there any prospects of increased yield by the application of manures?

Mr. Hilson—You can increase the yield enormously according to the amount of oilcake you use. What it really amounts to is the amount of nitrogen that you supply to the crop. The exact relation of the amount of nitrogen and the growth of the crop and the elimination of the bamboo is a subject, all that has to be worked out and you can increase the yield of crop on a heavy dose of nitrogen and you increase the chance of crop sludging. If you want to eliminate bamboos altogether, you will have to choose a variety for one thing and limit the amount of nitrogen that you give the crop to such an extent that you won't get excess of vegetation growth and the cane will be able to stand by itself.

President—Then of course the cost of manure has to be considered.

Mr. Hilson—Yes. There are prospects of improving the yield of crop and there are prospects of improving the actual economic return that you get from the land. In the North of the Presidency the cultivator has in the past been in the habit of using the oilcake only for manuring his crop. It is possible to replace part of the oilcake by ammonium sulphate.

President—Could you give us any kind of estimate as to the increased economic returns as a result of using ammonium sulphate—in terms of percentage of profits?

Mr. Hilson—Not very well. Both at Palni and at Anakapalle we are working out what effect the alteration in the amount or rather the proportions of the oilcake and ammonium sulphate has on the crop. It is possible to replace say a third of the oilcake by ammonium sulphate and the cost of ammonium sulphate is less than that of the cake.

Dr. Matthai—What about superphosphate? Is it a good manure for sugarcane?

Mr. Hilson—We have got no results which indicate that it is necessary definitely to apply superphosphate to sugarcane.

Dr. Matthai—So that your experiments are confined to the question of finding the proper relation between oilcake and ammonium sulphate?

Mr. Hilson—At the present moment we are trying to find out how much nitrogen to apply. We get a definite increase in the yield according as we apply 50 lbs of nitrogen or 100 or 150 or 200 lbs. Taking 100 lbs giving so much as cake and so much as ammonium sulphate we are trying to find out what would be the results. At present the results which we have got indicate that it is possible to replace part of the oilcake by ammonium sulphate and there is a consequent saving in the cost of production and an addition to the profit by that amount. It does not seem to me to make much difference in the actual yield of the crop.

Dr. Matthai—What difference then does it make?

Mr. Hilson —It makes a difference in the cost of production

President —So far as the *gur* industry is concerned I take it that the position is that in the Madras Presidency at any rate the price of *gur* is not affected by the price of white sugar and consequently any tariff assistance to white sugar will not affect the price of *gur*. Therefore any tariff assistance in the present conditions of Madras would not result in the extension or maintenance of the area under sugarcane cultivation

Mr. Hilson —Not unless you take the long view, set forth by Dr. Matthai

President —Unless the tariff is so fixed as to raise the price of imported white sugar in India to such an extent as to make it profitable even under unfavourable conditions to start sugar factories in Madras and to pay such a price for the cane as to render it less profitable to utilise that sugarcane for the manufacture of *gur*?

Mr. Hilson —Yes

Dr. Matthai —That is to say, fix the price of sugarcane in such a way as to bear a reasonable comparison with the jaggery price

Mr. Hilson —That is what it amounts to

Dr. Matthai —There is reference in the report that we got from the Imperial Agricultural Council to the position in Madras. They say that the Government of Madras consider that the immediate needs of the province have been met by the recent extension of the Coimbatore Research Station and by the opening of a provincial sugarcane farm at Anakapalle. What precisely is the extension of the Coimbatore sugarcane station which has been referred to here?

Mr. Hilson —They have taken up another area and appointed another man to work on thick canes

Dr. Matthai —Is there any attempt made to meet the specific needs of the Madras Presidency?

Mr. Hilson —That is what it is definitely for—the production of new varieties of thick canes. The bulk of the cane in the Presidency is thick

Dr. Matthai —How long is it since this extension was made?

Mr. Hilson —Only a few years. They are on the point of issuing canes. I went round that area the other day. If they have not handed out any thick canes to us for trial from this new station, they are on the point of giving us thick canes—new varieties of thick canes—for trial

Dr. Matthai —In your areas?

Mr. Hilson —Yes

Dr. Matthai —What is the reference to the opening of a provincial farm in Anakapalle? Is it a recent development?

Mr. Hilson —I started it in 1913 or something like that. We have extended the area recently in 1925-26

Dr. Matthai —What precisely is the sort of result that you try to get at an experimental station like Anakapalle? Are you trying there to work out methods for reducing the cost of growing sugarcane? Is that the main object?

Mr. Hilson —The main lines of work are the testing of varieties to find out newly yielding varieties

Dr. Matthai —You get your imported varieties from Java or Cuba and these new varieties from Coimbatore. You try them at the Anakapalle station?

Mr. Hilson —That is for yield. In addition to that we are investigating the muzzing of the sugarcane crop, methods of cultivation, spacing and the possibility of replacing hand labour by implements and bullocks and the amount of water that is used

Dr. Matthai —How many stations have you in the Madras Presidency like Anakapalle?

Mr. Hilson —In which sugarcane work is done?

Dr. Matthai —Yes

Mr. Hilson —One other station is Palur. In Samalkot also a certain amount of work is done on sugarcane.

Dr. Matthai —The most important is Anakapalle.

Mr. Hilson —Yes.

President —Have you any suggestions to make as regards methods in which assistance could be afforded to sugarcane cultivation other than by tariff? Have you any ideas on the subject at all?

Mr. Hilson —It seems to me the only other way in which you can help it is to point the way to effect a reduction in the cost of production plus an increase in the yield per acre.

President —By experiments and research?

Mr. Hilson —Yes.

President —Are there any directions in which experiments and research could be intensified? Is it a question of funds in any way?

Mr. Hilson —Well, as far as Madras is concerned, I could not say that. In a way it can be said it is a question of funds because staff and land will be needed.

President —If you were supplied with larger budget grants, could you make more rapid progress?

Mr. Hilson —Well, we could do more work.

Dr. Matthai —Do you think that the necessities of the Madras Presidency at present would justify the appointment of a specialist in sugarcane under you as you have, for example, a specialist in cotton? Is the problem sufficiently important for being tackled on these lines?

Mr. Hilson —With the opening of the extension at Coimbatore and the appointment of a man for breeding new strains of canes there is no need for a man for that purpose. What is wanted is research stations in the other districts.

Dr. Matthai —You don't think that the problem would be helped by the appointment of a man who could give his whole time to work out the sugar problem in the Presidency as a whole. At present work is being done by Deputy Directors along with their other duties. You are probably the only co-ordinating authority and you have got to do it along with your administrative work. That is the position.

Mr. Hilson —Yes.

Dr. Matthai —So that one line of advance might be the appointment of a specialist. I do not know whether you consider the question practically important.

President —Possibly the important areas under sugarcane are too scattered in Madras to make desirable the appointment of a single officer.

Mr. Hilson —As a matter of fact we have rather tested that position out, because we have a paddy specialist and I was a cotton specialist. Now we are going to have an oilseeds specialist. My experience as a cotton specialist was this. I got the Kovilpatty Agricultural Station handed to me and I had the station in Coimbatore. In addition I was doing work in co-operation with the Deputy Directors at Hagari, Nandyal etc. It seems to me that if I was going to be in the position of spending my time roaming about the Presidency moving from one station to another, the actual work—the detailed and fundamental work which should have been done was going to be neglected. The paddy specialist is in very much the same position. The millet specialist is another man who is going to be in the same position. He has got a station in Coimbatore and is opening a new station at Adoni in the Bellary District and is also doing work at Hagari and Nandyal. We put our heads together and argued the thing out. We came to the conclusion that the only way to do it was to get a good man—a gazetted officer capable of

doing research work—for each of the research stations and put him in charge and have the research station under the control of the Deputy Director of Agriculture of the circle

Dr. Matthai—And abolish the specialist?

Mr. Hilson—No. The specialist would tackle on his own station the more detailed and difficult kinds of work which require close attention and the research officers in charge of research station would deal with the broader lines which can be carried out and need to be carried out in the area to which they have to apply. For example taking cotton or millets, in the cotton breeding station or millet breeding station, the specialist officer concerned would work out the inheritance of the different characters for the purpose of finding out how to combine these characters to produce a strain which would give a heavier yield. On research stations, strains produced at the cotton or millet breeding station would be tested out which is a very much simpler line of work.

Dr. Matthai—To make the work of the specialist really effective you want first rate men to work in each circle on the farms.

Mr. Hilson—Yes.

Dr. Matthai—That is the idea of the whole arrangement.

Mr. Hilson—Yes, in order that the research work on research stations shall be looked after properly by a man who is a research officer he will then deal with the ordinary sort of research work on items affecting not only one crop but the other crops that are grown in rotation with that crop. What I mean is this. We have a millet specialist, a cotton specialist and an oilseeds specialist. Chulam, cotton and groundnuts are grown in rotation one after another. Work which is done on one is bound to affect the others. If you have got a specialist for each of these and each is going to open stations in different parts of the Presidency for his work, it means that you are going to have one station for cotton and another station for chulam.

Dr. Matthai—You cannot watch the rotations on one another.

Mr. Hilson—As far as the districts are concerned, it is better to have one station where the whole work is done.

Dr. Matthai—That kind of scheme would apply to sugarcane too.

Mr. Hilson—It would apply to sugarcane because sugarcane comes in rotation with ragi, groundnuts and crops of that sort.

President—But your actual research work on sugarcane would be largely carried out in Coimbatore.

Mr. Hilson—The plant breeding work would be carried out in Coimbatore. On these research stations, methods of manuring, cultivation, irrigation and the testing of strains would be carried out. What we need generally is more research stations and more research officers to man those research stations.

Dr. Matthai—Applying that argument to the case of sugarcane, it would mean more research stations like Anakapalle.

Mr. Hilson—Yes.

Dr. Matthai—With a first rate man to take charge of each station?

Mr. Hilson—Yes.

Dr. Matthai—I notice that the Government of India have sanctioned a special grant for the encouragement of research on sugar. Is Madras going to get a share?

Mr. Hilson—We have not sent up any proposals which definitely concern sugar but we need another station in the Ganjam district and under a sort of co-ordinating rice research scheme for the whole of India they have allotted a station at Ganjam. That station would be of the same type like the one at Anakapalle where not only rice will be grown but sugarcane as well. We already have the central farm at Coimbatore and stations in almost all the sugarcane growing centres, e.g., Samalkota, Anakapalle and Palur. There

is always in outcry for a station from the Hospet side but I don't think the area is big enough for the proposition

Dr. Matthai — Going back to your note on paddy there is one point I am not quite clear about. One of the most important points you make in that note is that there is a tendency to overproduction. You estimate the production at somewhere about 90,00,000 tons and in working out the figure for consumption you estimate that 40 per cent of the people in Madras eat rice.

Mr. Hulson — We were rather surprised ourselves. The way it was done is thus: we took caste by caste and wherever we know that a portion of the caste did eat rice we took the whole of the figure for that caste as being rice eaters.

Dr. Matthai — What do the other 60 per cent eat?

Mr. Hulson — They eat ragi, wheat, cholam, cumbu, Italian millet.

Dr. Matthai — Your own impression is that if you took the rice consuming population at 40 per cent it would be a fair estimate?

Mr. Hulson — Yes, as I make it out. I found we were producing more rice than we are consuming taking 40 per cent of the people as consuming rice. I was not at all sure that paddy was not being stored and I had evidence of that the other day. Someone told me of a friend of his who has got paddy stored for three years waiting for the price to go up. How much of the paddy is stored I do not know and how much of that 300,000 tons that come into Madras is again going out I should like to know.

Dr. Matthai — How long is it since they stopped the railborne statistics?

Mr. Hulson — Since 1921. They are going to start it again.

Dr. Matthai — It seems a serious position in regard to paddy.

Mr. Hulson — I don't see any hope for it myself. But as far as I can see a man who gets a good yield from his lands will be able to carry on. But they are funny about rice down Madras. A man will buy an engine and a pump for lifting water from the well to grow rice and you can show him all facts and figures that he is losing money on it but he does not care.

President — On the question of the price of jaggery only there is a case for growing sugarcane because the price of jaggery is very high in Madras.

Mr. Hulson — Yes.

President — There are very large additional areas in Madras coming under irrigation?

Mr. Hulson — Yes.

President — That is the Mettur scheme?

Mr. Hulson — Yes. I understand about 900,000 acres of single crop land can then be converted into double crop land.

President — That area might possibly be suitable for the establishment of a factory for the manufacture of white sugar?

Mr. Hulson — I don't know. I have not seen the area. I know very little about the Tanjore delta really.

Dr. Matthai — In charging water rates in the Madras Presidency what sort of interest on capital do they take into account?

Mr. Hulson — I do not know. I think in one irrigation scheme they are getting something like 8 per cent. One reason why they want to supply water to an area which has already got water is that the canals are there and if you give them more you may have to dig few fresh canals but you may not have to have more irrigation scheme.

DIRECTOR OF AGRICULTURE, BENGAL

**Oral Evidence of Mr R S FINLOW, C I E, Director of Agriculture,
Bengal, Mr K McLEAN, Assistant Director of Agriculture,
and Mr M CARBERY, Agricultural Chemist, recorded
at Calcutta on Friday, the 12th December, 1930**

President—Before we commence the examination, I want to be quite clear about the position of you three Gentlemen. I understand that the Bengal Government propose to express no views on the subject of protection?

Mr Finlow—I have not been told so.

President—Have you received any instructions from Government as to your position?

Mr Finlow—Only to appear before the Tariff Board.

President—Exactly whom do you represent?

Mr Finlow—We represent the Department of Agriculture. We are all in the Department of Agriculture.

President—May we take it that although the Bengal Government will not be committed, the views which will be expressed this morning will represent the views of the Department of Agriculture, and not entirely your personal views?

Mr Finlow—They would be the views of the Department of Agriculture.

President—We want to know what importance we should attach to your views?

Mr Finlow—I have not received any instruction from Government. The only thing I can say is that our answers to the Board's questionnaire were sent to you through the Government.

Mr Rahimtoola—Through the Minister for Agriculture?

Mr Finlow—Yes.

President—This is what your Government say —

"In continuation of this Department letter No 4209, dated the 20th August, 1930 on the above subject I am directed to forward herewith copies of letters noted in the margin containing the replies to the questionnaire issued by the Tariff Board from the Director of Agriculture, Bengal, and the Director of Industries Bengal, with the intimation that these embody their own opinion but not of the Government."

We have also received a telegram which reads as follows —

"Local Government do not propose authorising any officer speak definitely on their behalf. Director of Agriculture, Mr Carbery, Agricultural Chemist and Mr McLean, Assistant Director may be examined jointly as witnesses in ordinary way. Director of Agriculture suggests twelfth instant as convenient date examination. Please wire Agriculture, Ramna direct your final decision regarding date and hour examination."

What do they mean by "in ordinary way"?

Mr Finlow—We gave evidence before the Royal Commission on Agriculture. In the same way I take it that they want our views to be our own views, that is to say, professional views and not necessarily representing the views of Government. I would like to say this. We did not ask to be examined by the Tariff Board. The questionnaire was sent to us and we answered the questions. As a matter of fact we never anticipated that we would be examined.

President—May we take the position to be this—that as regards technical questions regarding agriculture, the Bengal Government thought that

your appearing as witnesses before us would be of assistance to us but as regards any question of policy you have no authority to speak?

Mr. Finlow—Yes

President—Mr. Finlow, you have been Director of Agriculture in Bengal for how many years?

Mr. Finlow—Continuously since 1922

President—Mr. McLean, you have been Assistant Director for how long?

Mr. McLean—For about six years

President—Mr. Chatterji, for how long have you been Agricultural Chemist?

Mr. Chatterji—For the last ten years

President—I take it that sugarcane cultivation in Bengal is not considered by the Agricultural Department to be of very great importance?

Mr. Finlow—Our views have changed considerably in the last ten years since the Agricultural Department began to issue better canes and the prospects of sugarcane cultivation on a bigger scale seem to be brighter now than before

President—Take the last ten years. I am judging now by the replies to the questionnaire which actually give far less details and far less information about facts than replies which we have received from other Governments. I take it that your interest in cane is probably entirely eclipsed by your interest in jute?

Mr. Finlow—Jute of course is a much bigger crop than cane and partly is enormously bigger than either. At the same time sugarcane we realise now is an important revenue crop

President—This change of attitude has been brought about by the present depression in jute?

Mr. Finlow—No. It has been growing for the last several years since we had a demand for better canes

President—In that time I understand from being an importing province, so far as *gur* is concerned, you are approaching self sufficiency

Mr. Finlow—We are approaching self sufficiency. But it is very difficult to say. We have figures for the import of sugar by sea from Java but we have no figures at present to show the imports of sugar from upcountry, that is to say from Bihar and the United Provinces. The rail borne statistics which used to be published are not published now

President—They were abolished in 1925

Mr. Finlow—I think in 1922

Dr. Matthai—What was the position in 1922 when you had the railborne statistics?

Mr. Finlow—The production was about 250,000 tons a year

Dr. Matthai—What was the consumption of *gur* in Bengal in 1922 taking the local production and import?

Mr. Finlow—Our forecast figures are 86 maunds of *gur* to the acre

President—You give a figure of total estimated production of *gur* for 1928-30 as 220,000 tons?

Mr. Finlow—Yes

President—What I am trying to get at is this. In 1922 you had the railborne statistics. You had your figures for local production for Bengal and you had also the figures for imports from other provinces. If you added the two you would get the consumption of Bengal in 1922. What exactly was the consumption then?

Mr. Finlow—200,000 acres under sugarcane at 86 maunds per acre would give an yield of 7,200,000 maunds of *gur*. In addition to that there

were roughly 100,000 tons date palm *gur* that is 2,900,000 maunds of date palm *gur*. In addition we had also the imports which might be roughly 250,000 maunds.

Dr. Matthai—Altogether the consumption might be 500,000 tons?

Mr. Finlow—It works out to about 20 lbs per head of the population.

Dr. Matthai—Approximately it is between 500,000 and 600,000 tons.

Mr. Finlow—Something like that.

Dr. Matthai—At present you are producing 220,000 tons—I mean that is your estimated production. To that you have to add date palm *gur* which is slightly over 100,000 tons. That gives you a local production of 300,000 tons.

Mr. Finlow—Yes.

Dr. Matthai—Would you say that there is at present probably an import of 200,000 tons assuming that the consumption remained the same?

Mr. Finlow—Only 200,000 maunds and not tons.

President—In 1922?

Mr. Finlow—Yes. That is only a comparatively small quantity.

Dr. Matthai—It is about 8,000 tons.

Mr. Finlow—Yes.

Dr. Matthai—On these figures the province is practically self-supporting as regards *gur*?

Mr. Finlow—It is approaching that stage.

Dr. Matthai—Supposing you extended the cultivation of improved varieties of cane or tried to use land which is now under jute for sugarcane cultivation, you would reach a position of glut in regard to *gur* in the province?

Mr. Finlow—Yes, the province would become self-supporting or more.

Dr. Matthai—If the province is self-supporting now, any further development must mean a glut of *gur* in Bengal unless you begin to export.

Mr. Finlow—We have anticipated that. I think we regard that situation as being very probable in the near future.

President—Let us take the general question of policy as explained in your note and the Indian position. I gather from your note that you are in favour of protection.

Mr. Finlow—What we gather now is that there is a certain amount of *gur* coming in from Java. The chief point is that the price which we have been getting for *gur* produced in our Government farms has suddenly fallen.

President—I gather from this note that your main object just at present in proposing protection is in the first place to enable the cultivator to maintain what is now one of the most important cash crops and in the second place to allow the area under cane to be extended to some extent to take the place of jute. Since the price of jute has slumped the area will to some extent decline while owing to the cultivation of improved kinds of jute this decline may continue.

Mr. Finlow—That is what we anticipate. As the improved varieties come under cultivation, for any given quantity the area would come down by something like 20 to 25 per cent. Sugarcane is one of the few crops that can take the place of jute. We do not anticipate that the whole of 25 per cent which would be released could be under sugarcane cultivation but only a portion might or should come under sugarcane cultivation.

President—In connection with these improved varieties of cane, I want you to consider for a moment the general position in India. We understand from the agricultural experts, taking the average the Coimbatore canes would give an increased yield of at least 50 per cent and possibly 100 per cent. If you take the United Provinces with over 1,300,000 acres under

sugarcane that would mean that if they are all under improved canes, they would get perhaps 600,000 maunds more *gur*. Assuming there is no white sugar industry, that additional *gur* has to be disposed of somewhere. It means a general reduction in the price of *gur* in the rest of India. If you are allowing for any increase in the cane area to help you out of the acute position, you may find that you are accentuating that position.

Mr. Finlow—We are not sure of that. We have no sugar factories in Bengal at present but there are one or two areas where sugarcane cultivation is sufficiently dense to encourage the idea that one or two factories may be established in Bengal in the reasonably near future.

Dr. Matthai—Where are these?

Mr. Finlow—One of them is in the northern circle.

Dr. Matthai—You say there is room for a couple of factories?

Mr. Finlow—In that area, that is in the Bogia district, and possibly in Dinagpur the density of sugarcane cultivation is sufficient to justify the belief that at some time when the cultivator has been sufficiently educated not to depend entirely on making his own *gur* but to bring it to a centre it would be possible to establish factories.

Dr. Matthai—These areas are above the flood level?

Mr. Finlow—That particular tract of the country is not inundated by flood.

Dr. Matthai—Supposing the position was that a sugar factory to be economically run should produce somewhere about 2,000 or 2,500 tons of sugar a year that might mean approximately 7 lakhs to 8 lakhs maunds of cane. In those areas that you are thinking of would the cultivation of cane be sufficiently dense to get that amount, say, within a reasonable distance?

Mr. Finlow—Yes.

Dr. Matthai—You can get this 700,000 maunds of cane?

Mr. Finlow—700,000 maunds, that would mean 1,600 acres.

Dr. Matthai—You want about 1,600 acres under cane to get that?

Mr. Finlow—Yes. This represents a two miles radius roughly.

President—Is there rail transport?

Mr. Finlow—Yes, in some cases it could easily be brought in by rail, after carting to the station. In others road transport would be the rule.

Dr. Matthai—What is the percentage, in these areas that you are speaking of, of the area under cane to the total cropped area?

Mr. Finlow—I would not like to say exactly what it is but I think if you said 1/10 that would be about right on the average, but it is quite possible that over a square mile it might be 1/1 or something like that.

Dr. Matthai—We may take about a minimum of how much?

Mr. Finlow—We have no definite information, but I think you can take 1/10.

Dr. Matthai—On that basis assuming that conditions were favourable how many factories do you think it would be possible to start taking a long view?

Mr. Finlow—There is room for the production of 4,000 to 5,000 tons of sugar in that part of the country. Cane is grown densely over a sufficient area to justify the erection of one or possibly more sugar factories, but we have to make a careful survey and find out what the density is, the distance over which cane will have to be borne and so on.

President—What markets would such factories supply in the matter of sugar?

Mr. Finlow—The only market they would supply would be in competition with Java and that would be Calcutta and places near it.

President—So that they would be in a less favourable position?

Mr Finlow—They would have to compete against Java sugar. I think that the average yield of cane in this part of India is probably high. On the whole, the climate is suitable, the soil is fertile and conditions generally are such that we get big yields of cane on the Government farms. And not only that crops of cane grown in the country side are quite substantial. In our forecast we put 36 maunds of *gur* to the acre.

President—The average in the United Provinces is 300 maunds of cane. Thus 36 maunds to the acre is not for Government farms?

Mr Finlow—No. Recently we have been making some experiments all over the country and it appears that this figure is rather low. It would be over 40 maunds.

Dr Matthai—If it is over 40 I suppose it would be about 500 maunds of cane?

Mr Finlow—400 to 500 maunds.

Dr Matthai—Can you tell me what is the distance of this area from Calcutta?

Mr McLean—Just under 200 miles.

President—What is the main railway?

Mr Finlow—Eastern Bengal Railway.

President—Would you come in competition with river transport upcountry?

Mr Finlow—I suppose so.

President—So that if the white sugar produced in these areas finds a market near the factory then it would come into very keen competition with Java sugar?

Mr Finlow—It would.

Dr Matthai—To that extent you would be at an appreciable disadvantage?

Mr Finlow—We would be at a disadvantage of 12 annas to a rupee a maund.

Dr Matthai—If you take the present price of sugar roughly at Rs 8-4 that means about 12 per cent.

Mr Finlow—What would be the difference between 80 and 4?

President—The position of any sugar factories established will depend more on the price of cane than the yield of cane.

Mr Finlow—If the cultivator is not prepared to sell his cane at the necessary price then of course the thing will go straight away. We were working it out and as far as we can see we anticipate a possible glut in *gur*, and the only way out which we can see is to manufacture sugar and open out a market in that way, otherwise whatever we do in the way of better yield by canes I think the acreage under cane will be reduced. But apart from the fact that at present it is a revenue crop, sugarcane is valuable to have in a rotation because it requires a good deal of cultivation and heavy manuring, so that from the point of view of general agriculture we do not desire to scrap cultivation of cane. There are advantages apart from the revenue producing capacity, that is really what we are looking at.

President—Considering Bengal by itself for the moment it would seem that the best policy for Bengal is not to extend the area under cane very largely but only so far as is necessary to supply its own requirements of *gur* and the needs of any sugar factories which may be established. The point I am trying to draw your attention to is that this question of protection to the white sugar industry is as much a question for Bengal as for the United Provinces. If you do not find an outlet for the increased output of cane resulting from the introduction of improved varieties, the agricultural position is not going to be helped by cane cultivation.

Mr Finlow—Yes.

Dr. Matthai—May I take it that your position so far as white sugar is concerned is this. Assuming that you are at a disadvantage of 12 annas as compared with the factories in the United Provinces and Bihar, that 12 annas per maund of sugar would correspond to, say, about an anna per maund of cane taking roughly 8 to 9 per cent extraction. If you can get a yield per acre in these areas in Bengal which will enable you to produce your cane about an anna cheaper per maund than you would have more or less an advantage with which to surmount this freight disadvantage?

Mr. Finlow—That is right.

President—Looking at the costs in the United Provinces and Bihar, on the assumption that we were able to devise such a price as to give the cultivator 8 annas per maund delivered at the factory.

Mr. Finlow—In our calculations we have arrived at between 5 and 6 annas to the cultivator.

President—That would mean that your factories in Bengal would be in a position to pay approximately 7 annas delivered at the factory.

Mr. Finlow—We worked it out this way. Taking the price of sugar at a certain figure—we have a certain amount of data—we came to the conclusion that if a factory were to be started it would have to be on the basis of something like six annas a maund to be paid to the cultivator.

President—There are two factors in favour of cane cultivation here as far as we can see. The first is that your production per acre is rather higher than in Northern India and the second is that, as far as I can gather from your replies to the questionnaire, your sucrose content is 16 to 18.

Mr. Finlow—That is Coimbatore cane. I would say 15 per cent.

President—That compares favourably with cane upcountry which is 11.6. Even supposing your sucrose content was 15 per cent your sugar factories would be able to extract more sugar and therefore pay a slightly higher rate for cane than might be expected in other parts of India.

Mr. Finlow—The actual sucrose content we did not take into account. It was really the yield of cane per acre and working down from that we concluded roughly that the cultivator would receive a reasonable amount for his cane at 8 annas a maund. There is another factor which is of importance in this respect, and that is the bringing of cane to the centric. At present we are aiming at working small power mills through co-operative societies. In an organized village co-operative societies or small capitalists could crush at so much per maund. We are working on a mill of that type and our idea is thus that the cultivator at present in Bengal differs from cultivators in other provinces in this respect. He has a tremendous rice crop which ripens at the end of December, then comes his sugarcane which is just about ripe at that time. Also in Bengal the *kharij* cultivation commences at a very early date, they sow in March or April. Upcountry they sow much later, but the Bengal cultivator has all these three operations at the very beginning of the year. That is very hard on his bullocks and time after time the cultivator has told us when we asked him "why don't you extend sugar cultivation in place of jute", that it is not possible because the bullocks cannot do it.

President—You are attempting some sort of co-operative crushing?

Mr. Finlow—Yes. We have not got the mill yet but at the end of the season we shall have a small mill which would crush up to a ton a day.

President—That will be a power mill run by oil?

Mr. Finlow—Driven by an oil engine or it might be any other power available.

President—Would it be cheaper than coal?

Mr. Finlow—Yes.

Dr. Matthai—Would you care to give us a short note giving an approximate estimate of the possibilities of sugar factories in Bengal without committing yourself?

Mr. Pinlow —We will try will it have to be done very quickly?

President —Say by the middle of January

Mr. Pinlow —We cannot do it by that time because we have got to go into those tracts and make a careful estimate

Dr. Matthan —If you can give us a general indication of the possibilities of finding an outlet for your sugarcane in the way of sugar factories by about the middle of January that will suit us

Mr. Pinlow —We will try

President —In your note to the local Government you stress the danger of imported *gur*. Have you any details about this?

Mr. Pinlow —None at all. We tried to get them but we have not succeeded

Dr. Matthan —You don't know to what extent it has been imported. Is it on the market?

Mr. Pinlow —We cannot get the information

President —We looked into this matter in other parts of India, Bombay and Madras, and although we found that very small consignments arrived, our general conclusion was that the effect on price was due to the result of the rumour

Mr. Pinlow —There was certainly a drop in price. In Dacca we produce about 500 maunds of *gur* a year. Up to the present we have had no difficulty in selling *gur* at from Rs. 7 to Rs. 9. This year we had difficulty in getting over Rs. 5

President —How much *gur* do you sell?

Mr. Pinlow —500 maunds. That is good quality *gur*

President —I notice that the price of *gur* has dropped from Rs. 10.46 to Rs. 5.8

Mr. Pinlow —These figures represent the fortnightly returns reported by the Collectors of Districts

President —Do you attach any importance to the Collector's figures for *gur*?

Mr. Pinlow —It is very difficult to say

President —In Bihar and Orissa where we recently went we discovered that these figures and also the acentage are usually collected by the police

Mr. Pinlow —I don't think the figures are entirely reliable

President —Being under a permanent settlement the Collectors are not in touch with the markets

Mr. Pinlow —I don't think the figures are as reliable as for instance they might be in a temporarily settled province

President —Even in the temporary settlement Mr. Clarke, United Provinces gave us his opinion that these prices of *gur* were not reliable

Mr. Pinlow —The Collector's figures for the present year do not seem to agree with the information we have received from other sources. They are too high. The Rs. 5.8 quoted for 1930 was an average price which we got at our farms, but the remainder are Collector's figures

Dr. Matthan —For 1930 the price that you actually realised was Rs. 5.8 and the price for September, 1930, as reported by the District Officers in your note is Rs. 8-12. That roughly is the measure of the discrepancy.

Mr. Pinlow —Probably the figures are comparable among themselves but not with quotations from other sources. It is also possible that the price at which one would be able to sell—our Rs. 5.8 for instance might be less than the price which a purchaser would have to pay

President —I think the Collector's figures are useful for showing variations. These prices are published fortnightly and if there is a very big drop or a very big increase, the Local Government's attention is drawn to it and for purposes of administration that is sufficient, but for purposes of any commercial undertaking one should not trust these figures

Mr. Finlow.—I agree.

Dr. Matthai.—If you take the *gun* price at present as Rs. 58, what is your own impression? What is the relative labour return that a cultivator would get from *gun* as compared with jute at the present price? Is it possible to say approximately what the relative position is?

Mr. Finlow.—The gross value of a jute crop at the present time is about Rs. 70 per acre.

President.—What are the cultivator's expenses?

Mr. Finlow.—It is very difficult to say, but I think taking into consideration the number of men required and the standard wage to be paid it would work out to Rs. 90 to Rs. 100.

Dr. Matthai.—That is putting a money value on every item of labour?

Mr. Finlow.—Yes, that is not a very reliable method of calculation.

Dr. Matthai.—Supposing you simply deduct the expenses incurred in cash?

Mr. Finlow.—Yes. What is of real value to the cultivator both in regard to jute and sugarcane is the gross amount that he gets. The amount of labour that he actually pays for is so small that it is only a small fraction of the total value of the crop. In the case of jute, weeding takes place in April-May. Supposing there is a long drought or continuous rain, the weeding in either case could not take place until favourable weather when it must be done immediately otherwise the crop would suffer. At that time the wages would go up to Re. 1 or more a day.

Dr. Matthai.—Please look at your note where you give the cost of making *gun*. Assuming he gets about 40 mounds of *gun* per acre that at Rs. 55 would come to Rs. 220. If you deduct from that the cost of manure and hire of pan and mill which I think are all cash expenses he gets a net labour income of Rs. 100 per acre.

Mr. Finlow.—Yes.

Dr. Matthai.—From jute he would get Rs. 50 labour income per acre. His total expenses of cultivation is Rs. 90. That is putting a money value on everything.

Mr. Finlow.—Yes.

Dr. Matthai.—Supposing you deducted only those expenses which he actually incurs in cash that is to say the rest of the thing is done by his labour or by the labour of his bullocks, what is the labour income that he gets per acre of jute?

Mr. Finlow.—In good years the actual cash disbursement would be nominal, but in a bad season it might be Rs. 20 or more per acre. Probably an average of Rs. 10 per acre would be reasonable. All this of course refers to the cultivator on an average holding and not to people who habitually employ hired labour.

Dr. Matthai.—That is to say he makes about Rs. 80 per acre of jute?

Mr. Finlow.—Yes, in the present year. On an average of the five years 1925-29 the gross return was about Rs. 150.

Dr. Matthai.—How many crops of jute would he have for the same period?

Mr. Finlow.—Only one crop of jute, also a crop of paddy or *rabl*. The advantage of jute is that it is a one season crop which can be converted into money inside about 4-5 months. Sugarcane takes a year or longer.

Dr. Matthai.—Supposing you made allowance for that, the position would be much the same. If he put the land under sugarcane or if he put the land under jute or some other crop during that year, the labour income that he would get would approximately be the same at present prices?

Mr. Finlow.—Yes.

President.—In normal times the cultivation of jute would be more profitable than sugarcane?

Mr. Pinlow—His gross income from sugarcane would be Rs. 250. Against that he would have to pay the hire charges of pans, mills, etc. That would put sugarcane and jute about on a parity.

President—If he was getting 50 maunds?

Mr. Pinlow—Even with 33 maunds at Rs. 7.

President—You think that Rs. 7 would be a normal price?

Mr. Pinlow—Yes, for several years.

President—You consider sugarcane and jute stand on much the same level?

Mr. Pinlow—Yes. That is what I was going to say. Sugarcane cultivation is only carried on on a small scale in Bengal. The land under sugarcane is only about 1 per cent. The area under sugarcane tends to be less when jute prices are high and vice versa.

Dr. Matthan—The real difference is that it is possible for us by means of tariffs to maintain the price of sugar, but jute being an export crop, it is entirely beyond our control.

Mr. Pinlow—In our sense yes, but it has to be remembered that jute is a monopoly of North-East India and therefore that it is also capable of control.

Dr. Matthan—Although they are on a basis of parity, from that point of view sugar is more important.

Mr. Pinlow—We think that more could be made of sugar in Bengal than has been done in recent years.

President—What about the other alternative crops which you speak of, paddy, tobacco, chilly and oilseeds? Paddy of course would not bring as good a return as sugarcane?

Mr. Pinlow—We reckon the gross value of paddy would be Rs. 10 at the present prices. Tobacco is a *rabi* crop.

President—On what does the price depend?

Mr. Pinlow—On world prices. Most of the tobacco is grown in the big tobacco tract, in northern Bengal.

President—Chilli has a very small local market?

Mr. Pinlow—Yes. There also the market is speculative. As regards tobacco we are introducing cultivation of cigar tobaccos on a cultivator's scale, the object being to enable him to export tobacco. We are trying to help the cultivator to get a wider market.

Dr. Matthan—What is the total acreage under Coimbatore canes in Bengal now?

Mr. Pinlow—We put it down at 20,000.

Dr. Matthan—We had a statement from the Sugar Bureau at Pusa in which the figure for Bengal is 100,000. I suppose they must have collected the figure from your reports.

Mr. Pinlow—The figure represents improved canes, including, Tana, not Co. 213 only.

Dr. Matthan—Your most prevalent cane is a Mauritius cane, is it not?

Mr. Pinlow—Yes, Tana was the first cane distributed by the Department. It has spread over a wide area and we are now replacing it by the Coimbatore canes as quickly as possible. There is no doubt that replacement is taking place. Any figure for the area of Co. 213 which we have given at the present moment is just a guess, but it is probable that it is more than 20,000 acres.

Dr. Matthan—You don't grow any other cane except 213?

Mr. Pinlow—Yes we do. Mr. Osbrey has a large number of canes under trial also. He has just put up a scheme which is now before the Imperial Council of Agricultural Research for a small sugarcane seedling testing station.

Dr. Matthal —Whereabouts is that?

Mr. Finlow —At Dacca

Dr. Matthal —What precisely is the function of that station? You test the seedlings brought from Coimbatore?

Mr. Finlow —At present the only thing we can do is to take the seedlings from any particular class which the Sugarcane Export thinks might do well in Bengal. What we would like to do is to take the whole of the progeny of a particular cross or a particular strain, test them and let them grow under local conditions. Then we can see how each member of the particular cross does behave. That is the object of the Sugarcane Testing Station, *viz.*, in order that we may have a broader experience of the progeny of a particular strain that might be suitable.

Dr. Matthal —At present practically the whole of your area under improved cane is under Co 213?

Mr. Finlow —Yes, apart from Tana, which is being replaced. There are one or two Coimbatore canes which seem to be suitable.

Dr. Matthal —In Bengal the only use they make of cane is to manufacture gur?

Mr. Finlow —No sugar is made.

Dr. Matthal —We were told that Coimbatore canes were rather hard canes and that it was difficult for the ordinary bullock mills to crush them satisfactorily.

Mr. Finlow —It has been said so in Bengal, but they are not nearly so hard as Tana cane.

Dr. Matthal —That was harder?

Mr. Finlow —Yes.

President —You have made no experiment with Pundia cane?

Mr. Finlow —Years ago we had a very large collection of canes, including Pundia.

President —As far as Bengal is concerned the experiments of the Coimbatore research station in thick tropical canes would probably produce something which is more suitable than Co 213?

Mr. Finlow —Mr. Carbery has asked the Sugarcane Export to try and produce a type of that cane which would be suitable to Bengal conditions.

President —Has he taken that up?

Mr. Finlow —Yes.

President —In answer to question 11 you say "Reduction of cost is possible in cultivation and manufacture of gur by adoption of improved implements and methods."

Mr. Finlow —What we really meant was improved crushing machinery.

President —What about methods of agriculture?

Mr. Finlow —That is better manuring.

President —Are there any directions in which reduction of cost could be brought about by improved methods of cultivation? Such as bottom trenching.

Mr. Finlow —That is the line we are working on in our farms.

President —Are you trying any artificial manure?

Mr. Finlow —Yes, I O I fertilisers.

President —Are your canes thick canes?

Mr. Carbery —Thin.

President —You don't have to use any bamboo for propping them up?

Mr. Carbery —We do.

President —We found in rice areas particularly in Madras that the cost of bamboos holding the crop is very high and by an improved variety

of cane and better methods of trenching, and so on it is hoped to dispense with props.

Mr. Carbery—That is true. There you are up against another problem. If you get a cane like P. O. F. 2787 or any other new cane, you find that they are liable to disease particularly in Bengal.

President—So that the attention of the Coimbatore Research Station would have to be directed mainly to producing a thick cane which is disease resisting?

Mr. Carbery—Yes.

Mr. Finlow—We never send out any cane from experimental farms to the districts until after five years. After five years if it is still free from disease and satisfactory in other directions, we attempt to spread it.

President—Have you advised Rao Bahadur Venkataraman about your requirements in the matter of sugarcane?

Mr. Finlow—He knows. He has actually been to Dacca.

Dr. Matthai—What is the arrangement in this seedling station? Is it going to be worked in consultation with the Coimbatore Research Station?

Mr. Finlow—It is going to be worked in collaboration with the Research Station at Coimbatore.

Dr. Matthai—But it would be under the local Government?

Mr. Finlow—Yes.

Dr. Matthai—As a matter of expert opinion what would you say? We have had a suggestion put to us by many witnesses that wherever you have a sub-station in other provinces to some extent the control should be in the hands of the Coimbatore expert?

Mr. Finlow—I think that the Coimbatore Station should certainly have a hand in the running of it. For instance we could not possibly test all the canes in our small station. We should certainly take his views as to which we should try. We also hope that he would come and visit us in Bengal, see our station and make suggestions to us. That has actually taken place twice already. Mr. Barber also had been here several times.

Dr. Matthai—Is this station financed by the Imperial Council?

Mr. Finlow—We have not got the money, but the scheme is to be discussed at the coming meeting of the Advisory Board of the Imperial Council of Agricultural Research.

Dr. Matthai—Is it a recurring grant?

Mr. Finlow—The application is for Rs. 13,000 altogether.

Dr. Matthai—Is it a consolidated grant?

Mr. Finlow—Yes for five years.

President—What is this Rs. 13,000 intended to cover?

Mr. Finlow—There is a certain amount of capital expenditure. Here is a statement which will give you all the details (handed in).

Dr. Matthai—According to your statements showing recurring and non-recurring expenditure for a period of five years, it would come to Rs. 13,000.

Mr. Finlow—Yes.

President—In connection with the view of the Department of Agriculture that cane is an important crop, have you any definite scheme which would require to be financed by the Imperial Council?

Mr. Finlow—There is one other scheme which I think has already been agreed to by the Imperial Council, and that is the proposal for a grant for experimental work on cane crushing and gur boiling plants. Those are the two. I don't think we have any other scheme with regard to sugar that we wish to put forward at the present moment.

Dr. Matthai—In addition to these, there is a considerable amount of sugarcane work done on the experimental farms?

Mr. Finlow — Yes

President — Does that require to be extended at all?

Mr. Carberry — It will be extended as required. We are looking forward to a future when there might be sugarcane factories each of which would require a minimum concentrated area of 2,500 acres. Some new canes are very promising.

Dr. Matthan — What cane is that?

Mr. Carberry — Co. 241 is one. It has still to be finally tested. I think possibly that something with less fibre will be suitable from the factory point of view and we are trying to evolve such a cane. I think that thicker canes don't have so much fibre.

President — Take this particular area which you have mentioned just now where it is possible that sugar factories might be started. Would any system of demonstration be required in those areas?

Mr. Finlow — Yes. Every year a considerable amount of demonstration work is done in that tract with fruitful results, but the Tana cane has now to be replaced with Coimbatore cane, and also the cultivator has to be educated to bringing his cane for sale to a centre instead of working it up himself.

President — There is no general scope for any increased expenditure in Bengal to be financed by the Imperial Council?

Mr. Finlow — I don't think so. For instance, demonstration is a local problem which I don't think the Imperial Council would ever undertake to spend money on. Anything which has to be done for the spreading of an improved cane should be done by the local Government. The seedling station helps us in getting good canes. It produces sets which are multiplied and tested at other stations in the province, and its all-India value would be in furnishing a means of comparing the behaviour of canes at this and at similar stations in other provinces. Then again, the crushing and boiling plant is obviously of general interest. Although as I have already remarked the urge towards the use of machinery is greater in Bengal on account of bullocks having to do heavy work within a short time, yet anything which we might produce in the way of efficient crushers would be of general advantage throughout India.

President — As regards your answer to question 12, I wonder if you would mind completing the statement of output per acre of these various crops.

Mr. Finlow — I shall let you have it later.

President — In answer to question 15 you have given a statement of price but you don't state the weight. Are the prices all for maunds?

Mr. McLean — Yes.

President — Question 17 is "Have there been any noticeable variations during this period in the areas under sugarcane in different circles in the province? If so, please specify them." You say "In Western and Northern Circles in the silk growing areas, however, sugarcane tends at least temporarily to replace mulberry owing to fall in the price of natural silk." It is a very general answer, is it not? What we really want to have is a note regarding any variation of particular interest taking the acreage under sugarcane for the last ten years?

Mr. Finlow — We shall give you the acreage figures for jute and sugarcane for 10 years.

President — Then we ask in question 19—How far do you consider the following causes contributed to variations in different years —

- (a) climatic conditions,
- (b) prices obtainable for *gur* jaggery,
- (c) prices obtainable for alternative cash crops?

We want to know the relative importance of these various causes with regard to sugarcane.

Mr. Finlow — We will try and give you some definite information later.

President—You simply say “19 (a) Area under sugarcane increases with favourable rainfall in the beginning of the sowing season” We know that already. The same criticism applies to the other replies to the same question.

Dr. Matthan—Are you definitely of opinion that there is no necessary connection between the variations in the price of *gur* and the variations in the price of white sugar? That is to say, do you think from your experience of Bengal that if there is an upward trend in the white sugar price there is also an upward trend in *gur* prices in Bengal?

Mr. Finlow—I am afraid I have not watched the *gur* and white sugar prices sufficiently closely.

President—In answer to question 27, you say that imported sugar affects prices. Exactly what prices you don't specify. Then again you say that the price of jute affects the purchasing power of cultivators. If you could give us the prices of *gur* in those years in which jute paid a good return thus indicating that there was a definite relation between the price of *gur* and the character of the jute crop, it would be useful.

Mr. Finlow—I shall supply you with more detailed answers to questions 17 and 27.

President—From your reply to Question 27, I gather that you do attach some importance to the influence of foreign sugar, because you say “Increased returns from improved canes introduced by the department have tended towards lowering prices but this is only because of the influx of foreign sugar or *gur* in competition.” I have not been able to understand what that means.

Mr. Finlow—It means sugar from outside and *gur* from other provinces.

President—I do not follow from that statement whether you attribute the reduction in price mainly to the increased output of *gur* in Bengal as a result of improved varieties of cane or whether you attribute it mainly to the influx of foreign white sugar or to the import of foreign *gur* and *gur* of other provinces.

Mr. Finlow—It is probably a combination of all three.

Dr. Matthan—The most important thing is increased production?

Mr. Finlow—What we feel is that the yield per acre of *gur* in Bengal is going up, that the margin between the production and consumption is small and that it would not take any large increase in acreage of cane in Bengal to overtake the actual consumption. That is one thing. Then as regards foreign sugar what we really meant was that if there was an increased import of foreign sugar it would tend to show that people were buying foreign sugar in preference to *gur*.

President—Not necessarily?

Mr. Finlow—No, but probably so.

President—You were saying just now that you had not made any representation to the Tariff Board regarding the sugar industry and that you had not asked to be examined that the Tariff Board took the initiative by sending you a copy of the questionnaire to be answered by you. I do not think you quite appreciate the position. If as would appear you are in favour of protection for the sugar industry, you must establish your claim to the satisfaction of this Board. The onus is on you to prove your case, and if you do not take the initiative in representing the requirements of the province in connection with the sugar industry, how can we make any recommendations in your favour?

Mr. Finlow—What we want to do is to get sugarcane as a substantial revenue crop in the province. What we desire is that the whole matter should be investigated. If there is a likelihood that foreign sugar is going to come in in sufficient quantities to materially lower prices, then we would like to put a protective duty on sugar.

President—The import of *gur* into Bengal must be a matter particularly within your knowledge. The import of foreign *gur* would kill your *gur* industry, would it not?

Mr. Pinlow—It would, but we have failed to get any definite information about it. Actually we did make enquiries and the answers we received were to the effect that there is no information.

President—Take again the reaction of the United Provinces *gur* on the price of *gur* in Bengal. That is a point on which we would like to be advised. As regards this danger of a glut of *gur* from the United Provinces, do you consider that a real danger?

Mr. Pinlow—We anticipate that the United Provinces *gur* will increase and if we don't improve our cane cultivation correspondingly the cane cultivation of Bengal will have to go out.

President—Following on that do you consider that it is necessary to attempt to provide some outlet for the increased amount of cane in the United Provinces by encouraging the development of sugar factories? We want to know what your opinion is from the point of view of Bengal.

Mr. Pinlow—It would be welcome if it is going to ease competition.

Dr. Matthai—Have you any detailed information about date palm *gur*? What is the price of date palm *gur* as compared with sugarcane *gur*?

Mr. Carbery—It is very low.

Dr. Matthai—What was the price last year?

Mr. Carbery—About Rs. 8-8 on an average, but in the last 5 years, prices appear to have varied between Rs. 2-8 and Rs. 1-8 per maund.

Dr. Matthai—In 1929, if the district prices are reliable, the price of sugarcane *gur* was Rs. 9-5 per maund and against that date palm *gur* was Rs. 2-12.

Mr. Carbery—Yes, Rs. 2-12 to Rs. 3.

Mr. Pinlow—We would have got the Collector's figures from the palm *gur* producing tracts if we had known that you wished to compare these figures with the price of sugarcane *gur*.

Dr. Matthai—Apart from any accurate estimates is it true that there is a very considerable difference in price?

Mr. Carbery—In some parts of Bengal they do not make ordinary *gur*. It is *patali gur* which is approximately toffee and which sells at a higher rate than *gur*.

Dr. Matthai—That would correspond to first class eating *gur* in the Deccan?

Mr. Carbery—Probably.

Dr. Matthai—Have you any information as to the sucrose content of date palm *gur*?

Mr. Carbery—Although the juice is quite rich the *gur* that is made is of a poorer quality, this being due to carelessness in collection and manufacture.

Dr. Matthai—I understand that sugarcane *gur* generally contains about 70 per cent sucrose?

Mr. Carbery—80 to 70 per cent.

Dr. Matthai—What is the sucrose content of date palm *gur*?

Mr. Carbery—It depends entirely on the way it is collected from the tree and on the way it is prepared. As I have already remarked palm juice carefully collected and boiled yields first class *gur*.

Dr. Matthai—The point I want to get at is this. If the date palm *gur* is so much cheaper than sugarcane *gur* would there be a case in Bengal for a *gur* refining industry from *gur* manufacture from date palm juice?

Mr Carbery—I don't think we have reliable information regarding the respective prices of palm *gur* and cane *gur* of the same sucrose content

Dr Matthai—Has the proposition ever been considered?

Mr Carbery—Yes. One difficulty in making date palm *gur* is the question of fuel which of course has to be provided, whereas in the case of cane the bagasse can be used as fuel. Fuel is expensive in Bengal. Another difficulty is the collection of small quantities of juice twice a day from each of a large number of trees. On the other hand there are no cultivation expenses.

Dr Matthai—Your experience here has led you to the conclusion that there is no future for the date palm sugar industry?

Mr Carbery—Not for preparation of sugar direct from the juice.

President—Is there any future for the manufacture of sugar from date palm *gur*?

Mr Carbery—It has dwindled seriously in recent years.

President—Palm *gur* was used for making sugar was it not?

Mr Carbery—Yes.

President—You say it is disappearing now?

Mr Carbery—As far as ordinary white sugar making from it is concerned it has been killed by imported sugar from Java. There is still a small manufacture for special purposes.

Dr Matthai—There was a report on date palm *gur* by one of the officers of your department?

Mr Carbery—Yes. That was by my predecessor.

Mr Pinlow—We can lend you a copy, if you want it.

Dr Matthai—I shall be glad to see it.

President—We have heard it suggested that there are in Calcutta factories making imitation *gur* out of imported brown sugar. Have you heard anything about it?

Mr McLean—Yes there is one in Sukhchar. That is for making very fine sugar for orthodox people. I don't know if it is really working now.

President—The suggestion was that brown sugar from Java is imported and it is either mixed with a certain proportion of local molasses and turned into sugar or else it is used for adulterating local *gur*, putting in a certain amount of brown sugar and selling it as first class Indian *gur*.

Mr Pinlow—We know nothing definite about that.

President—We heard in Bombay—we had fairly definite information there—that in the manufacture of sugarcandy imported sugar is melted down and sugarcandy is made and out of what is left imitation *gur* is manufactured.

Mr Pinlow—We have not been able to localise it but we have heard that something like that is going on.

President—What is the price of *gur* actually in Calcutta itself?

Mr Pinlow—We can send you the information later.

President—What I am trying to get at is, how the price of *gur* in the city itself would compare with your price of Rs 5.8. Both in Madras and Bombay we found that the price of *gur* was actually very high—as high as Rs 10 per maund.

Mr McLean—At that time the selling price in Calcutta was Rs 5.4. I shall let you have these prices, the price of *gur* in Calcutta as compared with the prices in the immediate neighbourhood.

President—There is one other small point which arises out of your answers to the questionnaire. You give the outturn of *gur* at about 50 maunds an acre and the outturn of cane at from about 600 to 700 maunds. That means that you are only getting one maund of *gur* for 12 maunds of cane.

Mr. Finlow—This output of cane per acre really represents what happens in Government farms, there the yield per acre is higher

President—What could we take as the average extraction of juice per cent of cane?

Mr. Finlow—Roughly 10 per cent

President—That is the same as in the United Provinces and the Punjab

Mr. Finlow—We reckon on something between 9 and 10 per cent

President—Is that on experiments conducted?

Mr. Finlow—Yes That is with the bullock mill

THE DIRECTOR OF INDUSTRIES, BOMBAY.

Oral Evidence of Mr P. B. ADVANI, recorded at Bombay on
Thursday, the 11th September, 1930

President—Mr. Advani, as regards the sugar industry—we wish to ascertain your position. We understand the Bombay Government is not in a position to give its opinion as to whether protection on sugar is in the interests of the Bombay Presidency until it has the Tariff Board's report before it and in consequence we understand that none of its officers are appearing in their official capacities.

Mr. Advani—That is so.

President—That is to say, so far as your evidence regarding sugar is concerned you would be giving evidence not as Director of Industries but in your private capacity. Is that correct?

Mr. Advani—Yes, that is correct.

President—Are you responsible for this memorandum which has been sent by the Bombay Government?

Mr. Advani—Yes, that is my memorandum.

President—Attached to that is a memorandum from the Director of Agriculture.

Mr. Advani—Yes. He forwarded it to me and I sent it on to the Government of Bombay.

President—In this memorandum you take the three conditions of the Fiscal Commission as regards the sugar industry and deal with them in turn and your conclusion is that the sugar industry fulfils the conditions of the Fiscal Commission. You have taken the cost of production of the sugarcane in the Deccan canal area at about Rs. 9 a maund.

Mr. Advani—Yes.

President—That is roughly what the Belapur Sugar Factory is now producing its sugarcane at.

Mr. Advani—Yes.

President—You say that with cane at Rs. 9 a maund the manufacturer of sugar should be able to produce at competitive rates. Do you mean with no protection at all?

Mr. Advani—No, that was not the intention. I merely wanted to show that sugarcane can be grown in the Deccan at a rate to enable sugar manufacturers to make sugar at a reasonable price. At present they are not able to.

President—What do you mean exactly by competitive rates?

Mr. Advani—That is, prices ruling with duty which would not be considered unreasonable. For instance, in the case of some articles they may require enormous prohibitive protection to enable them to compete. That consideration doesn't apply to this. The protection that will be granted will be reasonable according to the usual principles followed in this country.

President—I don't know what you consider an enormous rate of protection. The sugar industry is getting nearly 100 per cent under the revenue duty.

Mr. Advani—Yes.

President—I still don't understand what you mean by competitive rates. The obvious meaning is that with cane at Rs. 9 a maund a well equipped factory should be able to produce sugar so as to compete with the imported sugar with no duty.

Mr. Advani —I won't say that that was not the intention

President —Later on in your memorandum you say if the factory was well balanced it should be able to produce sugar at Rs 7 0 per maund with the cane at As 9 1 maund

Mr. Advani —That I believe is possible provided they had all the necessary facilities and sufficient land available to them and other facilities such as modern equipment and modern appliances

President —I don't quite follow what you mean in this particular paragraph, because you are trying to prove that the industry possesses natural advantages. You say that cane can be produced at As 9 and that is one of the natural advantages. The natural implication is that it is cheaper than other countries in the world

Mr. Advani —That is not what was intended. In any case it will take time to organise the factory system. Here there is at present only one factory and if, say, for 10 years there was sufficient protection, giving a sufficient margin of profit, that would attract capital and in course of time I expect that they would be able to produce cane and to produce sugar which would compete with the imported sugar without any protective duty—as distinct from the present revenue duty

President —That is the third condition. I understand you to mean that the price of cane at As 9 is quite all right and with cane produced at this rate the industry has a natural advantage. When the manufacturing side is properly organised it should be able to stand competition

Mr. Advani —When the manufacturing industry is properly organised, yes

President —Do you think it will be able to?

Mr. Advani —I think it should be able to subject to that proviso

President —At present the c i f price of Java sugar is about Rs 4 a maund. Accepting for the moment Mr. Wynne Sayer's figures which you give later on that sugar can be made at Rs 7 to Rs 7-6 per maund with cane at As 9, even then something like 60 per cent duty would be required

Mr. Advani —I was basing these figures on the prices of sugar that have been given on page 5

Dr. Matthai —You based it on last year's figures?

Mr. Advani —Yes. In December 1929 the price of sugar was about Rs 13 per cwt. That was the lowest that was reached

President —That was the internal price?

Mr. Advani —Yes

President —You have got to take the duty out of that

Mr. Advani —I won't say that. I always anticipated that there would be some kind of revenue duty there

Dr. Matthai —I suppose your proposition really comes to this that taking last year's duty, that is to say, the duty before March, 1930, as a normal revenue duty on sugar and taking last year's c i f prices and the price of As 9 for a maund of cane, there is a distinct possibility of the industry being able to dispense with protection

Mr. Advani —That was the idea. The whole case was based on those prices

President —You assume that with the present revenue duty and with the cane at As 9, in course of time if the manufacturing side is properly organised, any additional protection which might now be recommended by the Board would be dispensed with, is that your case?

Mr. Advani —That is the case

President —But you would not commit yourself to a statement that the production of cane at As 9 constitutes a natural advantage. So far as we

can understand cane is produced at Java at somewhere about As 3—cane of comparable quality

Mr. Advani—Although it may be As 9 now, I don't see why when the industry is organised and when there is a definite demand, it should not go below As 9. But taking the approximate figure reached by companies like Belapur, ultimately we should be able to go below that.

President—As matters stand at present you can hardly say that the cost at which cane is being produced in Bombay constitutes a natural advantage to the industry. It looks to me that it is the main disadvantage from which they suffer at present.

Mr. Advani—I would say this, that we have got the necessary land available and we can grow cane. Our cane prices are comparatively high because of lack of organisation. Organisation is a thing which can be acquired. I believe when that organisation comes along, I would not go on the basis of today's price of cane. I say the potentialities are there which have to be developed.

President—The Belapur factory on the cultivation side is very well organised.

Mr. Advani—Possibly yes. I am told that their land is not by any means the best for sugarcane.

President—Some of it is, though not all of it. Would you be able to find in many places in Bombay a tract of land all of the same quality, I mean the best? I quite agree that if you go to the demonstration farms, you would get a fair type of soil, sometimes very good, sometimes very fair. When you try to take up 5,000 acres it will be very difficult to find, at any rate in India, any land which is all exactly of the same quality. It is the difference between laboratory experiment and manufacture on a commercial scale.

Mr. Advani—Yes, but on the other hand there are big areas in the Deccan canal area which according to the Irrigation Department as well as the Agricultural Department—I think the Director of Agriculture would be able to elaborate this better than I would—could be made available to Sugar Companies.

President—Even so probably there will be some variation in the quality of the soil.

Mr. Advani—There is likely to be. I don't say that all the land will be of the same quality.

President—As far as we can make out at Belapur roughly one third of their land is more suitable for growing wheat than sugarcane and two-thirds of their land is really very good for sugarcane. As regards the wheat-growing land they have increased their yield by instituting different varieties of cane. You say that Mr. Wynne Sayer considers that it should be possible to reduce the cost of manufacture to Rs 7 or Rs 7-6 per maund. Did Mr. Wynne Sayer give you any statement? Was it the statement he made to you or what?

Mr. Advani—It was at a conference which was recently held in connection with the sugar industry and Mr. Wynne Sayer was present there. The proceedings of the conference were sent to me and this statement was culled from those proceedings.

Dr. Matthai—When was this conference?

Mr. Advani—Sometime towards the end of last year.

President—Did he support the statement by reference to figures or reference to other factories?

Mr. Advani—I think he supported this figure by reference to factories in the United Provinces. That is he gave figures of manufacture there which I believe I have also quoted.

President—Which figure is that?

Mr. Advani—Figures given in paragraph 4 of the letter.

President—In the United Provinces sugar is at present made at Rs 7-8 to Rs 8 per maund?

Mr. Advani—All those figures were supplied by Mr. Wynne Sayer at the conference.

President—We have figures from some of the United Provinces factories and Rs 7-8 represents approximately their works cost without taking into account the overhead charges or depreciation or interest on working capital.

Mr. Advani—I have taken the figures from the proceedings according to which they are based on an accurate ordinary basis which the Managing Agents call "all in" figures.

President—United Provinces cost of sugarcane is very much lower than the Deccan area.

Mr. Advani—It is not very much lower.

Dr. Mattoo—It is lower in the sense that their cost per maund of sugarcane is lower, but their cost of sugarcane per maund of finished sugar is not probably much lower.

President—The cost of sugarcane per maund of sugar produced is Rs 4-6-1. Take 11 per cent sugar to cane, which is what the Belapur factory gets. That at Rs 9 a maund of cane comes roughly to Rs 5.

Mr. Advani—Yes.

President—This figure of Rs 7 0 given by Mr. Wynne Sayer will leave Rs 2 to Rs 2 0 0 as manufacturing cost which is not very much. I think the Belapur costs are now about Rs 8 11 and they hope to get it down to somewhere about Rs 8, with an increase in output and with improved machinery too. These figures are rather on the optimistic side.

Mr. Advani—I am unable to express an opinion on that.

President—You state that on the Deccan canal areas there would be plenty of room for more factories?

Mr. Advani—Yes.

President—Is that unoccupied land?

Mr. Advani—In some cases it is unoccupied land, chiefly on the Nira right bank canal.

President—I was not quite sure, because in one of your replies you say that there are great difficulties about acquiring land for a factory.

Mr. Advani—There would be difficulties in acquiring land where it is occupied.

President—I thought, perhaps, there would be difficulties on the Nira right bank, but actually there would be no difficulty in providing sufficient land for a factory?

Mr. Advani—Such is my information.

President—You also gather from the Agricultural Department that the land is suitable for sugarcane cultivation?

Mr. Advani—Yes, but it requires investigation. The whole matter is being investigated.

President—You say for an economic production the company should have control of 20,000 acres of land. These figures are taken I suppose to fit in with the new block system of the Ligation Department. Is that the idea? You know the present rule is that not more than one-third of the area can be under sugarcane at any one time but I understand that a rule is being introduced to reduce that one-third down to one-fourth to prevent the deterioration of the soil.

Mr. Advani—That is the idea. It is considered good for sugarcane that it should be rotated. That is, one part of the area at any time may be under sugarcane and the rest should be under other crops.

President—You have taken the proportion at one-fourth—5,000 acres for 20,000 acres?

Mr. Advani—Yes

President—But of course of the sugarcane factories do not grow any other crop at any rate the Belapur factory grows no other crops. It takes the sugarcane crop and allows the land to lie fallow.

Mr. Advani—It is a loss to the company.

President—But they say that the growing of other crops under commercial conditions is not a paying proposition. It is better to let the land lie fallow. Of course, when the land lies fallow, it recuperates to a considerable extent so that there is not the same danger of soil exhaustion where the land is allowed to lie fallow after the sugarcane crop is taken. In the case of an ordinary cultivator, he may grow cane one year and another irrigated crop another year and so on in rotation.

Mr. Advani—I am under the impression that if other crops are grown, it would not exhaust the land to that extent, at least it would be quite good for sugarcane to be grown and the land would not be burdened from the economic point of view.

President—That is true. I think that the Irrigation Department rules are devised to ensure that the soil does not deteriorate.

Mr. Advani—I am under the impression that out of the 20,000 acres, say, 5,000 acres will be under sugarcane, 10,000 acres under other crops and 5,000 acres will lie fallow. I think it is not essential to keep the land fallow for two or three years at a time.

President—It may not be from the ordinary cultivator's point of view, but from the factory point of view, where they have to employ hired labour throughout, they say from the experiments they have made that it is not a commercial proposition to grow any other crops. It is better to let the land lie fallow because if they do so, the land improves and they get a larger yield of sugarcane when they grow sugarcane next. This is the line they take. In that case it would not be necessary to have such a large area as 20,000 acres.

Mr. Advani—This figure was also mentioned at that conference from both the irrigation and agricultural point of view.

President—It is a figure which the Irrigation Department suggested working up to in the case of ordinary agriculturists. They want not more than one-fourth to be under cane in any one year. What is suitable under ordinary conditions of agriculture might not be suitable under commercial conditions.

Mr. Advani—Supposing the price of sugar was sufficiently high so as to attract capital into the sugar industry, I would say that it would be necessary to investigate matters like the one under discussion, viz. the amount of land which may be allotted, what rotation should be followed, how and for what period the land may be kept fallow, and so on.

President—That is a point introduced by you in your memorandum merely to show that the requirements of the factory would not be so excessive that Government could not find the land?

Mr. Advani—That is the point.

President—Your information is that there is ample area suitable for one or more sugar factories?

Mr. Advani—Yes.

President—What is the point of view of the Irrigation Department? Did they give you any figures showing the total area available?

Mr. Advani—No figures have been given. It is considered essential from the Irrigation Department point of view that the sugar industry should be established in order that the land might be used profitably.

President—I was wondering under favourable conditions what would be the total output of sugar one could rely on from Bombay? For that reason

it might be desirable to get some idea as to the number of factories likely to be established

Mr. Advani—I am afraid I cannot reply that question

President—Perhaps the Director of Agriculture will be able to give it. We are examining him on Sunday on this subject and we shall take the opinion of the Irrigation Department officers when we come next year.

Mr. Advani—The Irrigation Department officers will be able to say more definitely as to the amount of land that could be made available.

Dr. Matthai—According to you, a factory must have under its control sufficient land to enable 5,000 acres to be under cane at any time?

Mr. Advani—Yes.

Dr. Matthai—Supposing we take a figure of about 2 tons of sugar per acre—they are now getting at Belapur a little more than 2½ tons—5,000 acres would mean 10,000 tons of sugar a year. If your suggestion is that an economical factory requires an output of 10,000 tons of sugar per year, of course, according to the present output of Indian factories at any rate it is a high figure.

Mr. Advani—The Belapur Company has nearly reached 5,000 tons.

Dr. Matthai—The Belapur Company produces 5,000 tons of sugar a year in about 2,000 acres and their contention is that about 5,000 tons of sugar a year is under present conditions an economical output. The whole difficulty is to give any kind of precise content to this term "economic production." It depends so much on the price of sugar.

Mr. Advani—I feel that if the factories are organised on a larger scale in India, overhead charges per unit will be lower and therefore the cost of production will tend to be lower.

Dr. Matthai—If the output is 10,000 tons, on establishment and overhead charges they could bring down the cost fairly considerably.

Mr. Advani—As the land is available provided capital can be attracted I should imagine that it would be an advantage if factories are organised on a larger scale than they are at present.

Dr. Matthai—I got the impression at Belapur that taking their present output of 5,000 tons of sugar a year and making some allowance for future reductions in manufacturing costs by about 10 or 12 annas per maund of sugar and also for some reduction in the cost of sugarcane, if you take the normal revenue duty into account and the freight advantage that they have in their own markets and the advantage that swadeshi sugar has for some reason over the imported sugar, it may be possible on an output of 5,000 tons for them to stand competition ultimately.

Mr. Advani—Yes, but I did not imply that 2,000 acres are not sufficient or 5,000 tons production is necessarily uneconomic. I merely wanted to say that 5,000 acres and 10,000 tons production would be a good proposition.

Dr. Matthai—You would not insist on an output of 10,000 tons of sugar?

Mr. Advani—No.

Dr. Matthai—The point is this. When estimating the costs of an Indian sugar factory for the purpose of fixing the measure of protection, you would not suggest that the costs should be based on an estimated output of 10,000 tons of sugar?

Mr. Advani—No. As I said, the only reason why I have given 5,000 acres and 10,000 tons of sugar is that it would be a good economic unit, but I don't say that units smaller than that will be necessarily uneconomic. I expect that probably a production of about 2,500 tons of sugar per annum would be fairly economic, but as you know the bigger the factory the lower its costs, and it would therefore be better to organise a bigger factory.

President—May I take it that your position is that so far as the possibility of sugar factories in the Bombay Presidency is concerned and the

possibility of then meeting competition from the sugar factories in Northern India, it would be justifiable to take an economic output of 10,000 tons of sugar for Bombay, although in Northern India where they depend very largely on the purchase of sugarcane, it might be difficult to establish one of that size?

Mr. Advani—Since we have land, we can do better than they

President—That is one of the advantages which the Bombay Presidency would claim as against the United Provinces?

Mr. Advani—Yes

President—In your last letter of 9th September you give us the different kinds of imitation *gur*. I suppose they are manufactured mainly in Bombay?

Mr. Advani—Yes

Dr. Matthal—In the Bombay city?

Mr. Advani—Yes

President—There are two kinds of this imitation *gur*, one prepared after the manufacture of sugarcandy and another made by a mixture of Java *gur* and imported crystal sugar?

Mr. Advani—Yes

President—This *gur* prepared after the manufacture of sugarcandy, is that merely a by-product of the manufacture of sugarcandy?

Mr. Advani—Sugarcandy is the main product

President—What is the process? You dissolve the imported sugar in water

Mr. Advani—Yes, and then boil it

President—The Indian sugarcandy contains rather large crystals?

Mr. Advani—Yes. They are used for ceremonial purposes and also for syrups

Dr. Matthal—That is a sort of molasses they get from sugarcandy?

Mr. Advani—I don't follow

Dr. Matthal—What I mean is that if you take ordinary white sugar, the masscuto consists partly of crystal sugar and partly of molasses

Mr. Advani—That is so

Dr. Matthal—The masscuto is the solution?

Mr. Advani—Yes

Dr. Matthal—When you get sugarcandy crystals out of that solution what is left over is *gur*. You dissolve the imported sugar in water and then you boil it and allow it to crystallise and the crystallisation gives you sugarcandy?

Mr. Advani—It does

Dr. Matthal—And you might say out of the mother liquor they get *gur*?

Mr. Advani—From the mother liquor they generally make "bura", but when prices justify they make *gur* out of it

Dr. Matthal—How exactly is *gur* obtained from the mother liquor?

President—Is that a special process?

Mr. Advani—They evaporate the water in the mother liquor and obtain what is called "bura" sugar—a fine powdery thing. Alternatively they mix certain ingredients with the mother liquor to give it the necessary colour and appearance, evaporate the water and thus make "*gur*"

President—It is a sort of yellow sugar?

Mr. Advani—Yes. But I have made enquiries and they are not making it now

President—They are not making sugarcandy now?

Mr. Advani—They are making sugarcandy but not the “gur”. They make this gur generally when the price of the local gur is high. At present they have told me they are not making it.

Dr. Matthai—What class of imported sugar do they use?

Mr. Advani—White sugar is used when sugarcandy is to be made leaving “bura” or “gur” as the bye-product. But when “bura” is required as the main product brown sugar is used, leaving gur as the bye product.

Dr. Matthai—It would be under 16 Dutch Standard?

Mr. Advani—For sugarcandy and “bura” above 16 D. S. is used. For “bura” and “gur” brown sugar 15 D. S. and below is used.

President—Don't they make sugarcandy throughout the year?

Mr. Advani—They make sugarcandy throughout the year because there is constant demand for that.

President—So that it is only when the price of gur is high I suppose instead of evaporating the mother liquor to a still greater extent they merely evaporate it to a certain extent and sell it as gur?

Mr. Advani—Yes, after mixing the proper ingredients.

President—The same with imitation gur. That also I suppose is made at certain times of the year when the price of gur is high?

Mr. Advani—Yes, that is generally made from May to October.

Dr. Matthai—Your main point in this letter, I take it, is that there are three kinds of imported stuff that might come in competition with indigenous gur. Taking the last first, there is the Java molasses which might be imported and sold as inferior gur.

Mr. Advani—Yes.

Dr. Matthai—Then there is gur which is made by mixing gur with inferior class of imported sugar, what you call banawat. Then there is gur which you get as bye product out of sugar.

Mr. Advani—Yes.

President—What about the flavour of this imitation gur?

Mr. Advani—I am told that the poor people are compelled to buy that when the price of indigenous good gur is high, but the flavour of indigenous gur is liked much better than of the “banawat” gur.

President—Is it put in retail in the market as banawat?

Mr. Advani—I think people are fairly clear in their minds that it is “banawat” though it may not be advertised as such.

President—I suppose it is pretty well confined to Bombay?

Mr. Advani—I am told that it is sent up country.

President—For sale in the towns?

Mr. Advani—Yes.

President—It would have no sale outside the towns?

Mr. Advani—It is very difficult for me to say that.

President—Which are the towns where this kind of gur goes?

Mr. Advani—It goes to the Gujarat towns, the Kathiawar States and it is also sent to Mesopotamia, Aden and Arabia.

President—Are there any special towns mentioned in Kathiawar and Gujarat?

Mr. Advani—I could get the information as to the towns where they export.

President—Do you think that this manufactured gur has any effect on the price of the local gur?

Mr. Advani—I expect they react on each other. That is what is claimed, that the local industry is suffering because of this banawat gur.

President —Not so much in competition I suppose but rumour gets abroad when a cargo of cheap Java sugar comes in. We were told that last year about December there was a sudden drop in the price of deshi gur on the Poona side of about Rs. 2 a Bombay maund as a result of a rumour that a large amount of gur was being imported from Java and for a month the price of gur was kept down by Rs. 2. Then it was found that the consignment was not so big and also it was of inferior quality, and the price went up again. So that one of the disadvantages of imports is that the price of country gur may be artificially depressed—a disadvantage from the point of view of the producer and advantage from the point of view of the consumer.

Mr. Advani —Yes.

Dr. Matthai —That, of course, mainly applies to Java gur imported as gur, but when you have these two classes of imitation gur then it is not merely a question of a temporary shock, it may to some extent exercise a general depressing influence on gur prices in the city. Taking your schedule I, for example, I notice that the price of this second class of gur which is really gur obtained as a bye-product in the process of making sugarcandy, is distinctly lower than the price of indigenous gur.

Mr. Advani —Yes, they all are. The price of class II gur as well as of banawat gur, is class for class lower, that is bearing in mind the season of the year, than deshi gur.

Dr. Matthai —The last class is apparently made at a time when the prices are high. It is not made during the slack season. When the Indian crushing season is past then you get small quantities of banawat put on the market which of course fetches a slightly lower price than the indigenous gur, but there the competition is not quite so great. If you take the inferior class of banawat it is 61 against 75 for swadeshi.

Mr. Advani —Yes.

Dr. Matthai —But the cheapest is No. II generally?

Mr. Advani —Yes.

Dr. Matthai —And that appears on the market in small quantities both in the slack season and the busy season?

Mr. Advani —Yes.

President —According to the price of gur?

Mr. Advani —Yes. I am told that they don't make this gur (class II) unless they have definite orders and unless it pays them.

President —No candy is imported, is it?

Mr. Advani —No.

President —The prices of gur are very high in the Bombay Presidency as compared with elsewhere in India?

Mr. Advani —Yes, so they would appear. I don't know very much about gur but I believe it is a better product than gur made in Northern India.

President —It is better probably because of the kind of cane it is made from. But presumably, if the forecasts of the Agricultural Department as regards output are fulfilled, with the new kind of cane, those prices will decline very largely.

Mr. Advani —Yes.

President —You would probably produce 10 tons where you now produce 80 tons at the same cost and get 98 per cent increase in your total production of gur. That is a point which, in the memorandum which the Local Government forwarded to us, has not been considered in connection with the matter of securing a market for white sugar for the Indian manufacturer. If you take the whole of India, if the claims of the Agricultural Department are correct, in the same area you are going to produce very much more cane. Either, therefore, your area has got to go down which is not desired, or in the alternative the gur consumption has to be expanded considerably which will mean a very large decrease in the price, a third alternative is the

possibility of manufacturing white sugar from sugarcane. So that unless you are able to capture the market for white sugar there may be this rather disconcerting effect on the price of *gur* as a result of the introduction of improved varieties of cane.

Mr. Advani — I don't know whether we can increase the acreage here for cane unless there are white sugar factories established.

President — That is to say, you think that the present acreage under cane is probably sufficient to meet the requirements of *gur*?

Mr. Advani — Yes, and the tendency really is towards increased consumption of sugar as compared to *gur*.

Dr. Matthai — All the prices you give here are retail prices?

Mr. Advani — Yes. These have been specially collected during the last few days. We have looked up the books of the people concerned and taken these figures from their books.

Dr. Matthai — In your schedule II you give the imports of Java sugar high in the Trade Returns would be shown as molasses. You have not been able to get these figures from the importers?

Mr. Advani — We have arrived at these figures from the talks we had with the trade people. These cannot be exact because we have not got figures from the Customs people.

Dr. Matthai — Generally your impression was when you talked to the dealers that in 1929 about 13,000 to 15,000 bags of Java *gur* as such were imported?

Mr. Advani — That is so.

Dr. Matthai — That would be about 1,600 tons?

Mr. Advani — Yes.

Dr. Matthai — None of that would be classed as inferior sugar in the trade returns?

Mr. Advani — No. They call it Java *gur* in the trade.

Dr. Matthai — What I am trying to get at is this. This is rather an important question. How much of Java *gur* is imported in the country? A good deal turns on that as far as the *gur* aspect of our enquiry is concerned. Looking at the trade returns I find sugar 15 D S and below for the whole year 1929-30 is 1,922 tons, so that if your estimate is correct probably the kind of stuff which is imported as *gur*, at any rate the stuff which comes in competition with *gur* here, must be shown under some other heading than inferior sugar and therefore probably under molasses.

Mr. Advani — Yes. Possibly so.

Dr. Matthai — There is another point about the figures. I had the impression that the importation of *gur* from Java was rather an exceptional thing last year. But your figures seem to suggest that small quantities have been steadily imported from year to year.

Mr. Advani — That is my information.

President — We certainly got the impression that the Dutch have been carefully investigating the market for *gur* in India and trial samples of some 100 tons were sent over last year. That you think is not the case?

Mr. Advani — My information is that it has been steadily coming in.

Dr. Matthai — I am inclined to think that a particular consignment that came last year was a special class of *gur* made in Java which was supposed to possess better lasting qualities than the Indian *gur*. That is to say, while it may be true as you suggest that every year some quantities of *gur* have come from Java, included in the trade returns as molasses, which in point of lasting quality were not particularly superior to Indian *gur*, last year they were able to get a class of *gur* made in Java so prepared that it possessed better lasting qualities than the Indian *gur*.

Mr. Advani — Yes. At present Java *gur* is not sold as such without treatment. I mean Java *gur* is mixed with inferior Java sugar and banawab

is prepared. What you say about last year's consignment being specially sent because it had better lasting qualities and also with a view to its being sold as *gur* is probably correct but the other *gur* figures that I have given for previous years are for the manufacture of *banawat gur*.

President—These are samples we got in Madras. Would this be eaten in its present form? (Sample shown.)

Mr. Advani—No. I am told that they make *banawat* out of this.

President—This keeps for a long time. We have had these with us since July. I suppose in manufacturing sugarcandy and *banawat gur* they use the ordinary 23 D S and below?

Mr. Advani—They use 23 D S and below.

President—Do they use inferior sugar? As my colleague pointed out, the import of inferior sugar was only 1,900 tons for the whole of India, during 1929-30.

Dr. Matthai—Of course inferior sugar means above 16 and below 23 D S for which there are no separate figures.

Mr. Advani—Between 16 and 23 D S, that is the class of sugar used.

President—When you say you have no information about the existence of any factories which refine sugar from *gur* or jaggery, may we take it that there are none?

Mr. Advani—I think so.

President—Sugar refining as such is not carried out?

Mr. Advani—No.

President—Then you say that the compulsory acquisition of land would have no application to any factories which might be established on the right bank of the Nira canal?

Mr. Advani—There is plenty of land there.

President—You say that you are in favour of some system of licensing factories. Would that be necessary in Bombay? It seems to me if these factories were to have their own area where they produce all the cane they require, it would be impossible for one factory to encroach on the other.

Mr. Advani—That is so. I had not those factories in mind which had their own land available. Supposing by some means, whether by water restriction or by any other means, Government arranged for the land to be made available by leasing to a sugar company, in that case it would be necessary to have some licensing system.

President—The position of the factory would then be practically the same.

Mr. Advani—Unless they leased for an indefinite period, it would not. Supposing the terms of the agreement lasted for five years and the Company entered into a fresh lease.

President—I see what you mean. Do you think that it would be possible without causing very serious discontent among the agricultural classes to use the Irrigation Department's powers of restricting water and to force them to lease the land?

Mr. Advani—If that is done tactfully and if the prices arranged are satisfactory, I don't think there should be any particular difficulty.

President—We have a good number of complaints, justified or unjustified against the Irrigation Department from the various cultivators whom we met in Poona and it does seem to me that this might make the Government in the Irrigation Department extremely unpopular.

Mr. Advani—I still think that if reasonable prices are guaranteed to the cultivator and if the land is given to him in rotation for cultivating other crops in the remaining areas it should not be difficult. The method adopted may or may not be very satisfactory. I don't say that withholding water is the only way. I merely made a suggestion. That may be one method.

Dr. Matthai—What the Sugar Committee had in view in their reference in paragraph 315 was a system of voluntary leases in which no kind of Government sanction was necessary. Their idea was the kind of leases arranged at Nellikuppam.

Mr. Advani—If you have voluntary leases and have licensing, then that would be all right. As long as there is no cut throat competition between two sugar factories, it is all right. Supposing I have a voluntary lease for five years and another Company comes along and enters into an agreement for the next 5 years, I am done for.

Dr. Matthai—Supposing you had a system of leases of that kind, how exactly would that operate? If I am one of the cane growers in that area and I am asked to enter into a lease with the approved sugar factory in that area, that is to say, that in regard to all the cane that I grow I must give the first refusal to this factory, does that imply I cannot grow sugarcane for the purpose of manufacturing *gur* myself?

Mr. Advani—I was looking at it this way—that, say, one third of the land should be available to the company to grow its cane at a certain rental and then the sugar company should hand over the land in as good a condition as it was before to the cultivator for him to grow other crops in rotation. When the third year comes he must again hand it back to the company. The sugar company should pay the rent for the land *plus* the labour charges to the cultivator if they engaged him as I expect they would.

Dr. Matthai—I have to hand over my land to the factory on a lease?

Mr. Advani—Yes, for a certain period in each cycle of years.

Dr. Matthai—And then it is open to the sugar factory either to do the cultivation itself or for you to do the cultivation on their behalf?

Mr. Advani—It would suit the company to employ the various cultivators who are there.

President—Even then, of course, in the event of any friction between the cultivators and the factory, the cultivators might say that they won't grow sugarcane at all.

Mr. Advani—The land will be in possession of the Company to grow cane, because it has been leased to it to grow cane. If necessary that could be stipulated. Just as now Government have assessing arrangements for revenue purpose, Government could make available the services of such assessing officer to see that the cultivator got a fair deal.

Dr. Matthai—It amounts really to a compulsory acquisition of leasehold rights.

Mr. Advani—In a way it does.

President—In the Bombay Presidency I understand in the irrigated areas at any rate Government as represented by the Irrigation Department have considerable power of control over the crops.

Mr. Advani—Yes, they have.

President—For instance, no cultivator can plant sugarcane without the consent in writing of the Irrigation Department?

Mr. Advani—That is my information. I would not like to commit myself.

President—That is what the ryots told us. Before they put down sugarcane they have to apply to the Irrigation Department, obtain the sanction of that department and then they plant the cane. As far as the Bombay Presidency is concerned your proposal is that the Irrigation Department should bring some pressure to bear on the cultivators to lease their land to factories. That is not such a very big departure from the present system.

Mr. Advani—That is so.

President—Do you know when this system was introduced in Bombay?

Mr. Advani—I don't know.

Dr. Matthai—The difference really is this—supposing I have permission to grow sugarcane on my land in order to make *gur* out of it, if your system

was entered, I would have to hand over my land to the factory for the purpose of growing sugarcane and making white sugar. That is to say, the Irrigation Department not merely decides whether sugarcane can be grown, but they have got further to decide whether the sugarcane should be used by me or should be sent to the factory.

Mr. Advani—It would boil down to that in a way.

President—Then, of course the cultivators would get something in the shape of rent.

Mr. Advani—He would get his rent plus his wages if he cares to work for the company for cane growing.

Dr. Matthai—It looks to me if you are going to rule out compulsory acquisition, the only way by which leases can be arranged is the way in which they were done at Nellikuppam. What happened there was that the sugar factory made it definitely worth while for the cultivator to hand over his land to the factory. That is he made a better thing than if he put it under cultivation himself.

Mr. Advani—That should be the ideal, but the circumstances there were favourable.

Dr. Matthai—That is the only thing which will make it workable.

Mr. Advani—Yes, but here in the beginning some compulsion will probably be necessary.

President—If the factory does that it will be more expensive.

Mr. Advani—This question does not arise in the case of land which is now unoccupied and is suitable. Where the land is already occupied and where the people are willing to enter into an agreement with the company, there is no question of pressure being applied. Pressure will probably be necessary in some cases. I expect, however, that ultimately the companies would make it worth their while to have the cultivators fairly content. Otherwise it would be difficult for them to continue in that area. I don't anticipate any very great difficulty in the cultivators getting a fair deal and being fairly happy.

Dr. Matthai—As I understand the real difference between the South Indian experiment and any experiment of the kind that may be made in the Deccan area is that in Nellikuppam the land was so poor that the ryot was making on the whole a poor business of it and therefore when the factory took over the land on long leases it was not unduly expensive to the factory. Here in the Deccan you have excellent land on which you can grow sugarcane and gum prices are fairly high and on the whole the business is satisfactory from the point of view of the grower. If you ask the factory to make it worth while for the cultivator the cost of the factory will be high.

Mr. Advani—Yes, in the beginning, but the company with its modern organisation and equipment should be expected to gradually decrease its cost of production of cane.

Dr. Matthai—At any rate it is not an immediate problem?

Mr. Advani—No, because I think sufficient land can be found elsewhere.

President—Supposing as a result of this enquiry a duty was imposed which would render the manufacture of sugar a fairly profitable business in India, the immediate developments, I imagine, in Bombay would be the establishment of factories on the right bank of the Nira canal?

Mr. Advani—I think the immediate course would be an enquiry to see exactly in what places lands are available and in what areas and to see which of the lands are suitable for cane growing. The facts would then be made known to attract the capitalists. That would obviously be the very first thing to do.

President—At any rate for a considerable period this problem of leasing would not arise?

Mr. Advani—No.

President—It would be possible to increase the output of sugar in Bombay very considerably without resorting to this system of licensing?

Mr. Advani—Yes

President—As regards the displacement of *gur* by white sugar, that is a feature of the towns mainly, is it not?

Mr. Advani—Yes

President—Do you consider that the increased import of white sugar is due to displacement of *gur* mainly or mainly to the expansion of demand in consequence of new tastes developing such as the taste for tea?

Mr. Advani—Expansion of the demand I should say

President—Is it mainly an expansion of the demand?

Mr. Advani—Yes

Dr. Matthai—Do you take the line that as far as big towns are concerned a rise in the price of sugar means a certain rise in the price of *gur*?

Mr. Advani—I think it does

Dr. Matthai—The only way in which that can really operate is this: if there is a rise in the price of sugar, some people who are consuming sugar now, may turn from sugar to *gur* and there will be a corresponding increase in the demand of *gur* and therefore the price of *gur* goes up

Mr. Advani—Yes

Dr. Matthai—When a man has got into the habit of consuming sugar in the town areas, he is not likely to revert to *gur* unless the rise is prohibitive from his point of view. If that is assumed, then it looks to me if there is a fall in the price of sugar, there may be a fall in the price of *gur*. But if there is a rise in the price of sugar, it does not necessarily follow that there will be a rise in the price of *gur*.

Mr. Advani—I don't think these two follow exactly in that way. My feeling is that for certain types of food in the Indian families, *gur* is used in any case. There is no question of one substituting the other. I expect no matter what the price of *gur* would be, a certain amount of *gur* will continue to be used in the Indian household for cooking purposes and also for some ceremonial purposes. That is a constant factor which would militate against any parallel running up or down.

Dr. Matthai—I am not suggesting that the variations will exactly correspond in the two cases. There is a large class of people who consume *gur* for certain purposes whatever may happen.

Mr. Advani—That is right

Dr. Matthai—Also you have a class of people who consume white sugar whatever may happen. There is a margin within which substitution takes place and I am trying to explain the way in which this may operate. Sugar can replace *gur*, but it is not likely to the same extent that *gur* will replace sugar.

Mr. Advani—That is so, unless the price difference was very great.

President—The consumption of *gur* in towns is, I suppose, a very small fraction of the consumption of *gur* in the whole of India.

Mr. Advani—Consumption of *gur* is in the smaller places.

President—Even if the price of *gur* and sugar rose in the towns it is unlikely to affect the general price of *gur* in the country to any considerable extent, because the demand in the towns is comparatively small.

Mr. Advani—I would not say in the country the *gur* is used irrespective of prices. In the country sugar would be used if the price of sugar were sufficiently low. If the price of sugar were about the same or lower, people in the country would use sugar.

President—I mean the cultivators?

Mr. Advani—I think that sugar would be preferred by the cultivators. At present they use sugar only for the purpose of tea or things like that, but

for sweetmeats and so on they use *gur*. I would not be prepared to say that they would use *gur* irrespective of price, except for some specific and ceremonial purposes.

President—We were told by the cultivators in Poona the other day that in the villages sugar was scarcely ever used at all whatever the price, it was mainly confined to towns.

Mr. Advani—I would not say that from my personal observation.

Dr. Matthai—Of course, it is very difficult to make an absolutely definite statement.

Mr. Advani—That is so.

Dr. Matthai—There must be a certain amount of reaction in the rural areas but not to such an extent as in towns.

Mr. Advani—That is so. I still think that apart from certain ceremonial purposes and also certain preparations which require the use of *gur*, if the price of sugar were sufficiently and substantially low it would take the place of *gur*. What I am trying to make out is that the villagers have not a definite preference for *gur* as such.

President—In the last three years the price of sugar has been steadily falling and the price of *gur* has not been increasing and yet the figures showing the acreage under sugarcane show an increase.

Mr. Advani—I think that probably a fairly large part of the demand for *gur* is due to the fact that *gur* is used for certain dishes and ceremonial purposes. For such drinks as tea, and for sweetmeats, they would use sugar wherever they can if the price is low enough.

President—They would almost always use sugar in tea?

Mr. Advani—Yes.

President—And *gur* would not be used in tea?

Mr. Advani—No.

President—Or in iced waters?

Mr. Advani—No.

President—In the case of these demands there is no question of substitution of *gur* for sugar whatever the price may be?

Mr. Advani—I don't think that there is anything radically against that. After all, *gur* is a sweetening food agent.

President—But the preference would be for sugar?

Mr. Advani—Yes.

President—It would require a very large increase or reduction of price to affect it?

Mr. Advani—Yes.

President—When you speak of the demand for sugar in the villages are you thinking of this demand for sweetening beverages, tea and so on?

Mr. Advani—Tea is very much used now-a-days. Tea is gaining ground rapidly.

President—So that when you speak of a reduction in the price of sugar stimulating its use in the villages you refer mainly to the fact that if sugar prices come down they will use more sugar with tea.

Mr. Advani—More people would use sugar with tea and if the price of sugar is sufficiently low, they will I think make also sweetmeats with sugar.

President—The price of sugar is low.

Mr. Advani—To that extent sugar would be used more. Sugar would displace *gur* in things like sweetmeats also.

President—Do they use fine white sugar?

Mr. Advani—I think that they would use inferior sugar.

President—Something between 10 and 23 Dutch Standard?

Mr. Advani—Yes.

Dr. Matthai — Perhaps 18 Dutch Standard?

Mr. Advani — Yes

Dr. Matthai — What one of the importers told us was that the kind of sugar used in sweetmeats was the second sugar

Mr. Advani — Yes

Dr. Matthai — It would be inferior and on the whole inferior to 23 Dutch Standard

Mr. Advani — That is so. I have seen that sugar in a number of villages. It is an inferior sugar.

President — Then you refer to the effect of the increase in the duty on Indian made confectioneries. Could you give us any opinion as to what the duty on sugar works out to at present on the cost of confectioneries? Our impression is that the duty on imported confectioneries is so high that nothing in the way of increasing the price of sugar would really affect the confectioneries out here. Imported confectionery is assessed at 30 per cent, and this duty is assessed not only on the sugar in such confectioneries but also on the labour and other charges which go to make up the cost. The value of imported confectionery works out to something like Rs. 90 per cwt.

Mr. Advani — The confectionery industry in this Presidency is comparatively small. We are only using Rs. 6 lakhs worth of sugar as against crores of rupees worth of sugar imported. I would like to go into that question a little more carefully. You say it works out to Rs. 90.

Dr. Matthai — Taking the trade figures for 1929-30, the total imports of confectionery was 28,000 cwt. and the total value was Rs. 25.64 lakhs. That gives you roughly Rs. 90 per cwt.

Mr. Advani — Yes

Dr. Matthai — So that it is not more than 1,500 tons of imported confectionery. It seems such a very small item.

Mr. Advani — As against that, the total value of sugar used in the manufacture of confectioneries in this Presidency is approximately Rs. 6 lakhs.

President — The imported confectioneries come to about 12 annas a lb.

Dr. Matthai — I expect that the whole of the imported confectionery is probably used by Europeans.

Mr. Advani — I would not be prepared to go so far as to say that. If you go into the Transi shops where they sell loose confectioneries you will find that a great deal is imported for Indian customers.

Dr. Matthai — That is only 1,500 tons as against a million tons of sugar that we consume here apart from gur?

Mr. Advani — That is so. What I meant was that I would not like the confectionery industry to suffer by any increase in the duty.

President — The people who go in for the confectionery industry, are they fairly educated people?

Mr. Advani — Yes. I have suggested to the Board some names of people who may like to appear before the Board.

President — If they are fairly educated people they must know that a reference regarding sugar has been made to the Tariff Board and they have made no application. So, we are entitled to presume that any increase in the duty is not likely to affect them. If people do not think it necessary to protect their own interests, we cannot do anything for them.

Mr. Advani — When I was going into the matter.

President — I quite see your point of view as representing the Department of Industries.

Mr. Advani — In this case I made a special attempt. I sent round the Industrial Chemist and asked him to find out how much sugar was used by them, how they were taxing and so on. That is why I have made a mention of that in my statement.

Dr. Matthai —What do you estimate the consumption of sugar at in the local confectioneries?

Mr. Advani —I presume you mean indigenous sweetmeat makers. It is extremely difficult to say. The local confectionery shop is in every nook and corner of the country. I mean the shop making *jilabis* and such things.

Dr. Matthai —It must be a fairly considerable quantity.

Mr. Advani —It must be an enormous quantity.

President —The local manufacturers use mainly imported sugar?

Mr. Advani —Yes, Java sugar.

President —But in the interior, apart from towns, *gur* is used in the confectionery manufacture?

Mr. Advani —Yes, in villages.

Dr. Matthai —You don't think it is necessary in case we increase the duty on sugar that there should be an offsetting duty on imported confectionery? The amount of imported confectionery in the first place is so small in quantity and further it is not of a kind that really comes into competition with the local confectionery.

Mr. Advani —It does not come into competition with the indigenous confectioneries. But I was thinking of acid drops, peppermints, etc., which are made now in Bombay.

President —Still if the duty was something like Rs. 28 per cwt. on imported confectioneries, an increase in the duty on sugar of, say, Rs. 18 would not affect them to any considerable extent.

Mr. Advani —It is possible.

President —It would probably mean no increase in the price of confectioneries.

Mr. Advani —It would be an extremely small proportion.

President —Is there a considerable margin in the price between the locally made confectioneries and imported confectioneries?

Mr. Advani —I would not like to answer that question off hand, but I shall look into it.

Dr. Matthai —It is really people like Parry and Company who would be really concerned with it. They manufacture confectionery of a kind that is similar to the imported stuff and if there was likely to be any need for assistance on account of the increased duty on sugar, they would know.

Mr. Advani —I expect that the bigger manufacturers would not probably keep silent. I have mentioned this merely to show that the extent of the use of sugar for European confectioneries is comparatively very small as compared with the total amount of sugar that is imported so that if the duty is increased on the imported sugar, it will mean greater good to the greatest number of people, but at the same time I am desirous that the confectionery industry should not be hard hit.

President —Have you any information as to the cost of manufacture of *gur*?

Mr. Advani —Do you mean *desi gur*?

President —Yes.

Mr. Advani —I have not. The agricultural people have been doing that.

President —You have no information at all?

Mr. Advani —No.

President —We have certain costs given by the cultivators at Poona but you would not be in a position to criticise these costs usefully?

Mr. Advani —No.

President —That is entirely a function of the Agricultural Department?

Mr. Advani —Yes, because they are more in touch with that kind of industry than I am.

**SUPERINTENDING ENGINEER, DECCAN IRRIGATION CIRCLE,
BOMBAY**

**Oral Evidence of Mr N B BAXTER, Superintending Engineer,
Deccan Irrigation Circle, Bombay, recorded at Bombay on
Tuesday, the 13th January, 1931.**

President—Mr Baxter, I don't think we have received any expression of your views?

Mr Baxter—My views and Mr Inglis's views are more or less embodied in the replies sent to you by the Government of Bombay

President—We have got Mr Inglis's views all the paragraphs coming from the Irrigation Department are headed "Irrigation, Development and Research Circle"

Mr Baxter—He is the head of that Circle

President—Are you in this "Development and Research" Report?

Mr Baxter—No He is a research officer really and I look after the maintenance and running of the Deccan canals

President—You have nothing to do with research?

Mr Baxter—No

President—What area is under your charge?

Mr Baxter—I have got all the main Deccan canals except one, the Nira Left Bank Canal, which is under Mr Inglis He looks after that Total area under command of the different canal systems in my charge is 12,80,874 acres excluding small tanks and bandhrias

President—The Bombay Government suggested to us that we should summon you as a witness Are we to take it that your views are the same as Mr Inglis's views?

Mr Baxter—No That does not necessarily follow

President—Not having any statement of your views before us we don't know really on what the Bombay Government want us to examine you

Mr Rahimtoola—Do I understand that the two departments are altogether separate, that you are not working in the same department?

Mr Baxter—We both belong to the Public Works Department, Irrigation Branch, but he is more or less a research officer whereas I look after the repairs and irrigation management of the canals

Mr Rahimtoola—Don't you come into contact with one another?

Mr Baxter—Yes We have to consult each other as regards the policy

Mr Rahimtoola—Don't you have any general discussions on the subject of development and research?

Mr Baxter—In connection with development and research we often have general discussions

Mr Rahimtoola—You must have seen the memorandum sent to us by him?

Mr Baxter—I have seen it

Mr Rahimtoola—Then owing to the absence of Mr Inglis I suppose you will be in a position to give us some information on the memorandum that has been presented to us?

Mr Baxter—I think I can

President—From the irrigation point of view you attach considerable importance to the cane crop?

Mr. Baxter —I reckon that in the Deccan without cane there can be no progress

President —Have you any idea what the capital cost of the Deccan canal system was?

Mr. Baxter —About 8 crores of rupees. To be exact the total capital expenditure on major canal systems in the Deccan is Rs. 8,81,15,461

President —And the interest charges on that?

Mr. Baxter —It varies from zero to 5 per cent, as some of them are a dead loss. The average may be taken as 3 to 3.5 per cent

President —So that if we took 3 per cent on 8 crores of rupees that would give us the approximate charge on the canals?

Mr. Baxter —Yes

President —What is the total amount of irrigation dues received from cane lands in the year?

Mr. Baxter —In the year 1929-30 it was Rs. 10,29,474

President —Speaking generally the cane land carries a very much heavier irrigation duty than ordinary lands, does it not?

Mr. Baxter —Yes. The rate for cane is Rs. 45 an acre and on crops like Rabi and so on about a quarter of that, and still Rs. 45 is a concession rate, the correct rate based on the existing rates for seasonals being Rs. 60

President —You have got some system under which the cultivator who puts, say, one acre under cane has to pay the irrigation rate on 3 acres?

Mr. Baxter —That is right. It is a system evolved out of one which has been in existence in the Deccan for centuries. It was evolved by Sir M. Visvesvarayya, who was afterwards Diwan of Mysore. The idea was that a man who had three acres of land must put one third of that under cane and the remaining two-thirds under other crops. We call that a block. The rate the man has to pay is calculated on assumed rotation of crops as under

- 1 acre cane
- 1 " eight months
- 1 " monsoon

President —Let us take a block for example, of three acres of which one acre is cane, what would be the other two?

Mr. Baxter —It might be two seasonal crops and the third *bajra*.

President —What would be the rates on each crop? One would be Rs. 45

Mr. Baxter —Two seasonal is Rs. 15, sugarcane Rs. 45 and *bajra* Rs. 5. The rates Rs. 15 and Rs. 5 are mean rates for light and heavy crops of the season.

President —How does that work out exactly? We have 3 acres, one Rs. 45, then Rs. 10 and Rs. 4.

Mr. Baxter —It would be the average of the three.

President —So that if a man grows one acre of cane and keeps the other two acres fallow he will still have to pay Rs. 45 + Rs. 10 + Rs. 4?

Mr. Baxter —Yes

President —It does not matter whether he cultivates or does not cultivate?

Mr. Baxter —No

Mr. Rahimtoola —Even without cultivation?

Mr. Baxter —Yes

President —I understand you usually want two years interval?

Mr. Baxter —That is right, if ratoon is not grown. If ratoon is grown, as is usually the case, the interval will be four years.

President —So that after growing cane on one acre of land you would have to give the land two years rest?

Mr. Baxter —The idea is to maintain the texture and the tilth of the land by proper rotation of the crop. That is the main idea of the rotation system.

President —After cane as a rule they grow some sort of crop?

Mr. Baxter —Yes. It might be cotton for instance. In the original system that exists in some parts of the Deccan they pay a consolidated rate which includes rent, development, market facilities and everything. That is the original system on which this is based. What people object to at present is having to pay for all the crops. A man may grow cane only but he has to pay for all whether he grows other crop or not.

Mr. Rahimtoola —A man has to pay Rs. 66 instead of Rs. 45?

Mr. Baxter —That is so.

President —I think you have special arrangements in regard to Belapur?

Mr. Baxter —Yes. They don't follow cane with other crop.

President —They simply pay Rs. 45?

Mr. Baxter —Yes.

President —Is that on the whole area or only the area under cane?

Mr. Baxter —Only the area under cane. The block system does not apply to them. If other crops are grown, they are charged extra on actual area irrigated at rates specified in the lease.

President —Another point we were rather puzzled about when we saw the various cultivators at Poona was in connection with the obtaining of permission to grow cane. We were told that before planting cane it would be necessary for the cultivator to obtain permission from the Irrigation Department. I will tell you exactly what the complaint is. If in February of this year you want to plant cane they said it would be necessary to write to the Irrigation Department not later than last June. By the time it has passed through various hands up to the Superintending Engineer, Development and then again in the office of the ordinary Irrigation Department through various people to the Superintending Engineer, Irrigation, and has then returned through the same channels to the cultivator, practically a year has elapsed. They say in consequence it is very difficult to decide whether to plant cane since the price of gum in a year's time cannot be foreseen.

Mr. Baxter —I am afraid there is some truth in that.

President —Has anything been done?

Mr. Baxter —We have been asked by Government to try to dispose of these cases sooner.

President —What is the actual necessity for getting sanction for planting cane? There must be some special reason as in other provinces it does not appear to be necessary.

Mr. Baxter —The whole thing rests on this that the soil in the Deccan is very liable to be damaged by waterlogging and the first essential is to find out whether the land is suitable, that is to say to classify the land. Once that has been done—and it takes time to do that—applications are sanctioned. If the land is suitable the man is allowed to grow cane.

Mr. Rahimtoola —Do I understand that Government has to go through a regular examination of the land before sanction is given?

Mr. Baxter —Yes. We actually dig borings to find what the soil is underneath, as a great deal depends on that to show whether drainage will be good or bad.

President —Is it possible to make your investigation once and for all?

Mr. Baxter —I can't say that it will ever be possible, but it will be remedied to a certain extent because there are certain lands which will not be affected by waterlogging, the others are liable to be affected.

President —Would it not be possible for instance to mark on the map certain areas which would under no circumstances be liable to waterlogging so that people in those areas could go ahead without getting sanction?

Mr. Baxter —It is possible in some areas

President —That would save some trouble. Then in those areas which are subject to waterlogging they must take their chance. But where there is no doubt about it, it seems superfluous to obtain sanction every year before planting cane.

Mr. Baxter —I think there are certain areas which need not be examined every now and then to see whether they are fit or not, but in those which are liable to damage it is necessary.

President —Do you think that the acreage under cane is going up?

Mr. Baxter —It is going down.

President —What are the reasons for that?

Mr. Baxter —For one thing the price of *gur* has gone down tremendously. That is perhaps the main factor.

President —Which is the main market for Deccan *gur*?

Mr. Baxter —Chiefly Bombay, Berar, Central Provinces, Gujarat, Northern part of Nizam's Dominions up to Hyderabad, Khandesh and Indore.

President —Does it come down to Bombay?

Mr. Baxter —Yes.

President —The price has fallen since when?

Mr. Baxter —It has been going down steadily for over a year.

President —Do you get any price returns?

Mr. Baxter —Yes.

President —What is the price now?

Mr. Baxter —It has been as low as Rs 18 per palla of 250 lbs.

President —That would be about Rs 4-5-0 per maund. What was it a year ago?

Mr. Baxter —Somewhere in the neighbourhood of Rs 24.

President —Which is the main market actually in the Deccan area?

Mr. Baxter —I think Gujarat, Khandesh and Berar are the chief markets.

President —Does any *gur* go down to Hyderabad?

Mr. Baxter —Yes.

President —From the United Provinces?

Mr. Baxter —Not much.

Mr. Rahimtoola —Do I understand that the decrease in the acreage under cane is due to the price and not to the defect in the soil?

Mr. Baxter —Not due to the defect in the soil. We produce better cane than anywhere else in India.

President —With Rs 4-5-0 per maund for *gur* the growing of cane can't be a paying proposition to the cultivator because his cultivation cost is not less than 10 annas, and with 10 maunds of cane to a maund of *gur* that comes to Rs 6 so that actually it is a losing proposition.

Mr. Baxter —Yes, it is. In the Deccan once the price goes below Rs 20 per palla, it is not a paying proposition.

Mr. Rahimtoola —What do the people do in that case?

Mr. Baxter —They carry on hoping that a brighter day will dawn.

Mr. Rahimtoola —And the assessment of Government is irrespective of what the price is?

Mr. Baxter —Yes.

Mr. Rahimtoola —That means a fixed assessment of Rs 45 per acre?

Mr. Baxter —Yes.

Mr. Rahimtoola —Isn't that hard on the cultivator?

Mr Baxter —This year on account of the low price there is a proposal to give remission. I was attending a cultivators' meeting only the other day and they very reasonably asked for one-third remission and two thirds suspension on account of low prices. I think that is reasonable.

President —What are the areas under cane? Are they small areas or big? What would be the average holding under cane?

Mr Baxter —15 acres. There are smaller areas of course.

President —Are there any areas in which cane cultivation is sufficiently concentrated to admit of the possibility of the establishment of sugar factories?

Mr Baxter —Yes, there are, but the trouble will be to get people to sell their cane to the factories.

President —Why? What is the difficulty about that?

Mr Baxter —Because as soon as the price of *gur* goes up they prefer to manufacture it themselves. But I do not say it is impossible. I say if they are given some encouragement in the way of lowering of water rates or if the duty on sugar is increased and a certain portion of it is devoted to encourage them to sell their cane to the factories, then it is possible.

President —Supposing the price of sugar was increased by an increase in the duty to enable the factories to pay 10 annas a maund for their cane, would that be sufficient inducement?

Mr Baxter —I should think so.

President —Which are the principal areas in which you think cane is sufficiently concentrated? How many possible sites are there for factories on the Deccan side?

Mr Baxter —I should think half a dozen.

Mr Rahimtoola —I suppose there is no agreement with Belapur that there should be no other factory near about their factory?

Mr Baxter —I don't think so.

President —Would you name the towns near which you can have these factories?

Mr Baxter —I should say Phaltan, Mahalung, Loni near Poona, Baranmati and Kopeigaon and also Belapur.

Mr Rahimtoola —There is still sufficient cane for another factory at Belapur?

Mr Baxter —Yes.

Mr Rahimtoola —As regards Phaltan I think it is a Native State.

Mr Baxter —Yes. The canal passes right through the State. For the benefit of the canal we must encourage Phaltan.

Mr Rahimtoola —It would be difficult for any capitalist to have a factory in a Native State. If cane is grown in the State that can't be a very attractive proposition for a capitalist.

Mr Baxter —Cane growing may be concentrated just outside the State, the actual area in the State itself is very limited.

President —There was a factory at Baranmati, was there not?

Mr Baxter —Yes.

President —It did not work, because it could not obtain cane?

Mr Baxter —That is right.

President —When was it closed?

Mr Baxter —I think after the boom years of the war—about 1925.

President —At that time the price of sugar was going down and the price of *gur* was keeping up.

Mr Baxter —People made fortunes in *gur* at that time.

President —Are there any other reasons which restrict the area under cane?

Mr Baxter —There are two schools of thought in this matter. Mr Inglis thinks that there can be no expansion with *gur*, that we are already glutted and when the supply exceeds the demand, then the prices fall. There is another school of thought who maintain that so long as *gur* comes into Bombay from outside—I am of that opinion also—there is scope for increasing the cultivation of cane.

President —It depends on what price they can produce *gur* in other provinces.

Mr Baxter —Yes. Of course a great deal depends on reducing the cost of production. I admit that.

President —That can only come about by improved varieties of cane.

Mr Baxter —Yes. They have been using a tremendous amount of manure which I don't think is necessary. Proportionate return with less manure will probably be higher. Experiments to this effect are carried out by the special Irrigation Division.

Mr Rahimtoola —Has the department done anything in the way of increasing the area under cane?

Mr Baxter —At present it is restricting the increase because of the over-production of *gur*.

President —In the United Provinces, as you know, and in Bihar and Orissa the varieties of cane produced at Coimbatore are peculiarly suited to the climate. The Coimbatore Research Station has been working up to the present almost entirely on canes which are suitable for a non-tropical area like northern India. But the Coimbatore canes are not really so suited to Bombay as they are suited to Upper India.

Mr Baxter —No, they are not. There has been a great lack of research in the Deccan area.

President —There they have an advantage. Another point is that they have increased their area under Coimbatore cane very largely and in some parts in Rohilkhand 70 to 80 per cent of the acreage is under improved canes, so that if as a result of the introduction of improved varieties output will be increased by at least 50 per cent which is the conservative estimate of the Agricultural Department then as the United Provinces and Bihar and Orissa together constitute more than half the acreage of the whole of India, there will be an enormous surplus of *gur* and they will probably dump it into Bombay.

Mr Baxter —I think it is very likely.

President —So that you might see your *gur* prices going lower still in which case your cane area might go out almost entirely. That would be a serious position for the Bombay Government?

Mr Baxter —Without cane the Deccan canal area is nowhere at all. That would mean very serious financial loss to Government.

President —And at the same time it would seriously affect the agricultural position in the canal zone?

Mr Baxter —Yes.

President —Because I am given to understand by the agricultural experts that the cultivation of cane is almost essential in the agricultural system in India in order to get the best out of other suitable crops.

Mr Baxter —I think that for Deccan conditions cane is absolutely essential and without cane there will be no cultivation at all.

President —So that you agree that something has got to be done to take off the surplus cane which the Agricultural Department informs us is coming along?

Mr Baxter —Yes.

President —The only practicable scheme that has been suggested is to encourage the production of white sugar in sugar factories.

Mr. Baxter — I think that the ideal solution is to have sugar factories. Until they are established I think we should encourage *gur*.

President — In the meantime of course everything must be done in South India to reduce the cost of cultivation so that they may be able to hold their own against outside competition. That is the position?

Mr. Baxter — Yes.

Mr. Rahimtoola — Is it not then advisable on the part of Government to devote more of their time attracting capital for the establishment of sugar factories in order to keep up the cane acreage?

Mr. Baxter — I think the sugar factory is the ideal solution of the problem.

Mr. Rahimtoola — As far as the capitalists' point of view is concerned, unless they receive Government support or backing, they are not in a position to invest money in sugar factories.

Mr. Baxter — Yes. As regards sugar factories there will be the question of getting sufficient land in the vicinity of the factory to grow the necessary amount of cane.

Mr. Rahimtoola — You just now told us that there are half a dozen places where there is or can be had sufficient amount of cane for a factory.

Mr. Baxter — Yes, provided people sell it. How are you going to compel them to sell it?

Mr. Rahimtoola — They are compelled to sell it for this reason that if the price of *gur* goes down as you yourself pointed out, either they don't produce the cane or don't grow the cane or want some other outlet for their cane.

Mr. Baxter — The moment the price rises, they will start manufacturing *gur*.

Mr. Rahimtoola — You just now also gave us to understand that Rs. 10 a maund for cane would be an attractive price for the cultivator to sell to the factory.

Mr. Baxter — Yes, that would be an attractive price, but still that does not preclude the cultivator from manufacturing *gur* unless he is bound legally in some way or other.

President — If the price of sugar was established at a level which would enable factories to pay 10 annas a maund for cane, then it would seem that probably the cultivator would at any rate for some years be only too glad to sell his cane to the factory.

Mr. Baxter — I think so.

President — After he had been selling for a number of years if the price of *gur* rose probably the factories might by that time have some permanent arrangements with the cultivators. In the United Provinces although there is no formal agreement there is an understood arrangement by which the cultivators are in the habit of supplying cane to the factory. In consideration of the advance free of interest, which they have received the year before they always deliver their cane at the factory. In certain parts up there the manufacture of *gur* is very restricted.

Mr. Baxter — I should think that some such system could be evolved in the Deccan too.

Mr. Rahimtoola — Would Government be prepared to grant some sort of facilities for the capitalists?

Mr. Baxter — I think so. The fate of the Deccan canal is dependent on that.

Mr. Rahimtoola — May I know what exactly is the research work that is being done by the Superintending Engineer?

Mr. Baxter — Research as regards designs of canals and devices for measuring water. He is actually doing research work as regards the quantity of water required by certain crops, and also as regards (1) Land

drainage, (2) Reclamation of salt and waterlogged lands, (3) Block revision and formation, (4) Canal weeds, (5) Effluent Irrigation and (6) Soil physics

Mr Rahimtoola —Is he not carrying on research as to what soil is fit for what crop?

Mr Butler —Yes, research to this extent as to what soil is suitable for cane but chiefly as regards drainage he made a soil classification survey of practically all the area in the Deccan Section

Mr Rahimtoola —There are some points suggested by Mr Inglis in the memorandum I do not know whether you have read them The most important I find is whether anything has been done to reduce the cost of production under Deccan conditions

Mr Baxter —The Agricultural Department has made certain experiments at Manjri farm They might have a much wider scope than we have

Mr Rahimtoola —They have not concentrated on that point till now as to how far it is possible to reduce the cost of production?

Mr Baxter —The cost of production in the Deccan area is far above that of any other part of India

Mr Rahimtoola —Another point is the loss of productivity of the soil As I told you they have not been able to get as much from the soil as they would under the ordinary circumstances

Mr Baxter —What usually happens in the Deccan is that you get a bumper crop for two years and in most cases the soil deteriorates Questions of this sort require investigation

Mr Rahimtoola —Does the cultivator go to you if there is a deterioration of his soil and ask you for examination or advice or anything of that sort?

Mr Baxter —No

Mr Rahimtoola —Does the Inspector or a representative of the department go round for annual inspection to find out whether there is any trouble or any hardship to the cultivator?

Mr Butler —Mr Inglis has started doing that

Mr Rahimtoola —They do go round?

Mr Butler —Yes

CUSTOMS DEPARTMENT, MADRAS

**Oral Evidence of Mr F. BUCKNEY, Collector of Customs, Madras,
and Mr E. E. GREENE, Appraiser, recorded at Madras
on Monday, the 30th June, 1930**

President—You are Collector of Customs, Madras

Mr Buckney—Yes, officiating

President—When did you take over charge?

Mr Buckney—About the end of February 1930

President—Your experience of Madras Customs is really very limited?

Mr Buckney—My recent experience is limited. I left Madras at the end of 1928

President—Were you here before?

Mr Buckney—Yes, in 1923. I was here from 1909—1913, 1918-19, 1920—23

President—Have you seen the terms of reference regarding the enquiry into the Sugar Industry?

Mr Buckney—Yes

President—I want to draw your attention to the first paragraph of the resolution wherein mention is made of the various kinds of sugar. Can you explain to us what exactly is a Dutch Standard?

Mr Buckney—It depends on the colour of the sugar

President—Entirely on that and it has nothing to do with sucrose content?

Mr Buckney—Entirely on colour

President—How do you test the colour?

Mr Buckney—We get standard samples and test it

President—Is it decided by colorimeter?

Mr Buckney—We don't do it by colorimeter

President—There must be some sort of definite standard set up. Take for instance 23 Dutch Standard. It must have some very definite meaning

Mr Buckney—It has

President—Not now but at your leisure, could you obtain for us the definition of Dutch Standard and let us have it in writing?

Mr Buckney—Yes

President—We have not so far been able to understand what the Dutch Standard is

Dr Matthan—Who does the examination? Who is your Assistant who actually does the examination of it?

President—With a view to seeing whether it is 23 Dutch Standard or not?

Mr Buckney—It is done by the Appraising Department

President—Do they do it by the eye?

Mr Buckney—Yes

President—Entirely?

Mr Buckney—Yes

President—Is there no chemical test?

Mr Buckney—No

President—Could you give us some sort of description of the three different kinds? What would 23 Dutch Standard be like?

Mr. Buckney —It is pure white

President —That is the white crystal sugar

Mr. Buckney —Yes

President —How would 23 Dutch Standard and 8 Dutch Standard look?

Mr. Buckney —No 8 Dutch Standard is distinctly brown. No 23 Dutch Standard is white, I can show you the samples

President —Would it be very inconvenient for you to get the Appraiser here who does the actual appraising work?

Mr. Buckney —No, I shall send for him

President —Since these new duties have been imposed, has there been any reduction in the import of sugar in Madras—I mean any appreciable reduction?

Mr. Buckney —Yes, but I must look at the figures. See A (addendum)

President —Could you give us any information about prices?

Mr. Buckney —With the increase in the duty, the price has gone up

President —The market price has not gone up very much. At present the price has gone up only by Rs 1-4-0. But you would not have information about market prices

Mr. Buckney —No, but the Appraiser could tell you when he comes up. See B

President —We will now take up the question of sugar. How do you determine the quality?

Mr. Greene —Simply by colour

President —There is no chemical test

Mr. Greene —No

Dr. Matthai —What is it you call 24 Dutch Standard? What is Dutch Standard?

Mr. Greene —I can't tell you

President —Is it possible to find out some sort of definition of Dutch Standard?

Mr. Greene —I will make an effort to find out

President —Speaking generally 23 and above is white crystalline and below that down to 8 is brown?

Mr. Greene —Yes

President —Your classification is 23 and above and then 23 to 8?

Mr. Greene —Yes

President —What does the latter include?

Mr. Greene —All kinds of brown sugar. 8 and below is assessed at another rate

President —Have you got anything below 8 here in these samples?

Mr. Greene —No. Sugar below 8 Dutch Standard and sugar candy and molasses come under one classification at Rs 5 8 0

President —Have you had any Java *gur* imported into Madras? We heard that in Bombay Dutch and Java *gur* was imported to the extent of 500 or 600 tons

Mr. Greene —We have had some importation here

President —Where would jaggery come in?

Mr. Greene —It would come under 8 Dutch Standard and below, that is the only classification we can put it under

Dr. Matthai —That is described to us as dry hard jaggery which keeps

Mr. Greene —Yes

Dr. Matthai —Was it bitter stuff?

Mr. Greene —No

Dr. Matthai —Has much been imported here?

Mr. Greene — Not very much

President — Would it be 200 tons?

Mr. Greene — Not as much as that

President — Could you get us a sample?

Mr. Greene — Yes. When do you want the sample?

President — By the 31st July

Mr. Greene — Yes, I will get you a sample of it if it is available in the market

President — Of course some *gur* is of a lighter colour. I have seen samples

Mr. Greene — I have not seen the samples

President — You are quite clear that anything in the nature of *gur* would be classed below 8 Dutch Standard

Mr. Greene — Yes

Dr. Matthai — There has been a fall in the price of sugar since March?

Mr. Greene — I have not studied the price of sugar during the last few months, because as far as we are concerned the stuff is liable to duty at a protective rate. I can give you that from our records

Dr. Matthai — Can you give us the prices since the new duty was imposed?

Mr. Buckley — Yes

President — Where do you get the samples from?

Mr. Greene — From Java

President — It has no reference to the sucrose content at all? You simply look at the colour?

Mr. Greene — Yes. We do not as a rule get sugar below 23 Dutch Standard. It is very seldom that we get anything else

Dr. Matthai — Generally the invoice bears the description of 24 Dutch Standard and unless there is some very strong ground for suspecting it, you pass it off?

Mr. Greene — Samples are always compared with the consignments

President — When you get 22 Dutch Standard you will have to compare very minutely, because there is very little difference between 22 and 23 Dutch Standards

Mr. Greene — As far as I can recollect we never had anything below 22 Dutch Standard. We never had a doubtful case

Dr. Matthai — You will always suspect the stuff on the border line

Mr. Greene — We have had none

President — It is practically 23 and above?

Mr. Greene — We have never had a border line case

Dr. Matthai — How long has the classification proceeded on these lines? Now 23 Dutch Standard and 8 Dutch Standard are the dividing lines for duty purposes

Mr. Greene — It has been in force for some years, I think. (From 1st June 1925)

Dr. Matthai — What I don't understand is in these trade returns which I suppose are compiled on figures sent up by the various Customs offices, they group the figures under different headings. You have got figures for 16 Dutch Standard and above and figures for 15 Dutch Standard and below. How is the Director General of Commercial Intelligence able to get these figures? For actual customs purposes, you use a different dividing line. I have never been able to make out how they are able to do it. This is what happens (shows the returns). I don't know what they gain by adopting a different dividing line

Mr. Buckley — The tariff headings were rather more detailed. See G. H. There was a larger range of tariff values,

Dr. Matthai —They still issue their statistics according to those other dividing lines, although Customs people have levied duties on a different system

Mr. Buckney —There is not much point in that unless there is any demand for it

President —Do you get much sugar candy imported?

Mr. Greene —Very small quantities

President —Where does it come from?

Mr. Buckney —I couldn't tell you (A small quantity of 11 tons came last year from China)

President —A certain amount of molasses is imported?

Mr. Buckney —Comparatively little at this port (About 7 000 tons were imported last year)

Dr. Matthai —This is what was stated in the Assembly "23 Dutch Standard and above is white refined sugar below 23, but not inferior to 11 is brown sugar and sugar between 14 to 8 is not consumed, but is imported for refining purpose and sugar below 8 Dutch Standard refers to *guar*"

President —You can tell us something about 14 to 8?

Dr. Matthai —Nothing below 23 is imported

Mr. Buckney —Comparatively little

President —Could you give us the quantity of No. 18 imported?

Mr. Buckney —No The bulk of the sugar imported is 23 and above

Dr. Matthai —When you say bulk, it is about 90 per cent sugar?

Mr. Buckney —Yes

CUSTOMS DEPARTMENT, CALCUTTA.

**Oral Evidence of Mr W. J. WARD, Assistant Collector of Customs
and Mr K. MENON, Principal Appraiser, given jointly at
Calcutta on Saturday, the 4th October, 1930**

President—We examined the Collector of Customs about a year ago on methylated spirit. The enquiry has been hung up because in the meantime we had sugar referred to us and we thought it convenient to deal with the duty on molasses in the course of our sugar enquiry. The figures which he gave us a year ago are probably out of date. Could you give us the present price of imported denatured spirit at Calcutta and also the tariff valuation?

Witness—It is Rs 1-1-6 per gallon.

President—What about molasses? Have you got a tariff valuation?

Witness—Rs 2-10-0 per cwt for molasses imported in bulk by tank steamer. That is soft and Rs 3-2-0 for molasses imported otherwise. That is hard or soft.

President—There is no distinction between hard and soft in the tariff valuation because you cannot import hard molasses by tank steamer?

Witness—No.

President—Has the tariff valuation been changed? Could you inform us of the c.i.f. price Calcutta of denatured spirit and molasses soft and hard, for the last six months? I will explain why we want these figures. For the purpose of comparison on the ground of tariff equality it is not sufficient to take the tariff classification figures. As you know those are changed from year to year and if we find that the trade prices are going up it might be necessary to take a higher or a lower figure as the case may be than the tariff valuation according as the trade prices varied on the one side or the other.

Witness—Yes.

IMPERIAL SUGARCANE STATION, COIMBATORE.

Oral Evidence of Rao Bahadur T. S. VENKATRAMAN and
Mr VELLINGHIRI GOUNDER, recorded at the Imperial
Sugarcane Station, Coimbatore, on Saturday,
the 28th June, 1930

President —What is the exact position you hold?

Mr Venkatraman —I am called the Sugarcane expert and I am under the Government of India

President —Are you in charge of the Coimbatore Sugarcane station?

Mr Venkatraman —Yes, I am in charge of the sugarcane breeding station at Coimbatore. The station under my control is engaged solely in the work of breeding improved sugarcanes

President —For supply to Northern India?

Mr Venkatraman —For supplying India and Burma. Now we have started work for supplying Southern and the rest of Tropical India as well

President —How long have you held your present post?

Mr Venkatraman —From 1919

President —And before that?

Mr Venkatraman —I was an assistant at this Station

President —So altogether you have spent how many years?

Mr Venkatraman —From the year 1912, that is, from the very commencement of the station, I have been connected with it, i.e., for nearly two decades

President —Mr Gounder, I understand you are a practical agriculturist?

Mr Gounder —Yes

President —Do you cultivate sugarcane on a large scale?

Mr Gounder —Yes

President —How many acres do you usually put under sugarcane?

Mr Gounder —On an average I have about 5 acres under sugarcane. The other work I do through my tenants under my own supervision

President —Do you make gur from your cane?

Mr Gounder —Do you mean jaggery?

President —Yes. Do you manufacture it from your own sugarcane?

Mr Gounder —Yes, from my own cane

President —You don't purchase cane from your tenants?

Mr Gounder —No

Mr Mattha —What is the total area of the land under sugarcane held by your tenants?

Mr Gounder —Roughly about 800 acres

President —What I want first of all to ascertain is this. If I was an agriculturist and I was not quite sure what crops I was going to put down but was rather inclined to put down sugarcane, what conditions should I first examine before I determined to plant sugarcane? Take for instance the soil. What particular soil do you want for sugarcane?

Mr Gounder —Mostly clayey soil

President —What other crops can you grow on the same soil, supposing you determined not to grow sugarcane?

Mr Gounder —Cambodia cotton

President—Can you grow rice?

Mr Gounder—Yes

President—Jowar?

Mr Gounder—Yes, cholam can be grown

President—Any other crop?

Mr Gounder—Tobacco can be grown also

President—So that really the soil which is suitable for sugarcane cultivation would be suitable for most other crops

Mr Gounder—Yes, that is all under well irrigation and not channel irrigation

President—Then, the second consideration I suppose would be the question of ways and means

Mr Gounder—Yes

President—Roughly could you give us an idea as to the capital expenditure involved in putting down an acre of sugarcane for manuring, manual labour for ploughing, weeding and so on?

Mr Gounder—It will come to about Rs 300 per acre

President—So that Rs 300 would be practically an outlay for a year

Mr Gounder—Yes

President—So that, to start with, if I wanted to grow sugarcane I should have to be a man of some means

Mr Gounder—Yes

President—It would be impossible, whatever the price of gur or sugarcane might be, for a small cultivator to undertake it. Am I correct?

Mr Gounder—Yes, it would be very difficult for a very small cultivator

President—Supposing the price of gur was to be doubled?

Mr Gounder—The cultivator can try a small area, within his means

President—Only a very small area?

Mr Gounder—Yes

President—The area would be limited by his means

Mr Gounder—Yes

President—Another limiting factor is the question of water supply

Mr Gounder—Yes

President—Here in Coimbatore before you could grow cane you would have to dig a well

Mr Gounder—Yes. We would have to make sure that there is water in the well or canal. I should never dream of cultivating sugarcane without making sure of water supply

President—Before I undertook to grow sugarcane I should have to consider the ways and means of sinking a well

Mr Gounder—Yes, to make sure of water supply throughout the year

President—Then comes the question of manure

Mr Gounder—Yes

President—What sort of manure do you require?

Mr Gounder—Ordinary farmyard manure and to some extent oilcakes

President—You don't use superphosphate, do you?

Mr Gounder—No

President—Sodium nitrate?

Mr Gounder—No. In a few small areas the manure dealers are just giving us to experiment this and that

President—About Rs 300 per acre is the outlay of money

Mr Gounder —Yes It may be a little more or a little less according to seasonal conditions

President —Will that include the rent of land?

Mr Gounder —No

President —What would be the rent?

Mr Gounder —It will vary from Rs 50 to Rs 100

President —Is that not very high?

Mr Gounder —Yes

Mr Venkatraman —Only good land can be put under sugarcane

President —Supposing we put out of pocket expenses at Rs 800, would that be correct?

Mr Gounder —I think that it is better, if rent is to be included in it, to put it a little higher—say about Rs 375

President —Taking the average crop of sugarcane here and taking a normal year, how many tons to the acre would you get?

Mr Gounder —I can give you an idea only in maunds

President —How much will that be?

Mr Gounder —30 to 40 *pothi*, 1 *pothi* being equal to 10 Madras maunds

President —It will be 300 to 400 Madras maunds

Mr Gounder —Yes, one maund being equal to 25 lbs

President —It will be equal to 100 to 125 Bengal maunds, the Bengal maund being equal to 82 lbs

Mr Gounder —Yes

Dr Matthai —You say you get about 300 to 400 maunds

Mr Gounder —Yes, of jaggery

President —What about the cane?

Mr Gounder —We don't weigh the cane

President —How much does that fetch?

Mr Gounder —On an average we get Rs 2 to 2 80 per Madras maund

President —That is quite a good price

Mr Gounder —Suddenly we find a reduction in price even as low as Rs 1-8 0

President —You would get anything from Rs 600 to Rs 900, which will be the value of the crop Is that about right?

Mr Gounder —Yes

President —That is on an outlay of about Rs 400

Mr Gounder —Yes

President —Would that include the cultivator's own labour? When you are taking in this Rs 400 the cost of manure, the cost of rent, the cost of labour employed in sowing and so on, the small cultivator would work himself

Mr Gounder —Yes

President —Do you include that in this Rs 400?

Mr Gounder —No

President —The profit will amount to anything between Rs 200 and Rs 500

Mr Gounder —Yes

President —Out of that the agriculturist has got to find his own living

Mr Gounder —Yes

President —So that his wages will come out of that

Mr Gounder —Yes

President—Can you give me an idea as to how the profits from sugarcane compare with profits from any other crop in a similar land? Take an acre of rice

Mr. Gounder—We get much more income from sugarcane. Of that there is no doubt, but it is a crop which requires attention throughout the year

President—Yes, but could you give me any sort of idea as to how they would compare, I mean the profits from an acre of sugarcane and those from an acre of rice

Mr. Gounder—Profits depend upon many other things

President—It depends upon season and so on

Mr. Gounder—Yes, the particular locality and the sustaining capacity of the soil it to wait for some months. It will take about 18 months for the preparation of the land, 12 months for harvesting and 2 months for marketing. Altogether he will have to wait about 1½ years to get any income from sugarcane

President—I quite see the difficulties. Every riyat would not be able to surmount them. Could you give me any idea as to how the profits would compare?

Mr. Venkatiaraman—Profits will vary according to the provinces

President—Supposing I took your farm and divided it into two halves?

Mr. Venkatiaraman—There are no reliable figures which you could get from the farm here. As you saw this morning, we have to grow different strains for experimental purposes

Dr. Matthai—Would you be able to give us a rough statement based on your actual experience during, say, two or three recent years giving us the expenses of cultivation of sugarcane in some particular year that you are familiar with and the expenses of cultivation of paddy in some year that you know of, and then give us also for a corresponding period the prices realised for sugarcane or *gur* and paddy?

Mr. Gounder—Any other crop would take only 4 or 5 months or at the most 6 months

Dr. Matthai—Paddy would be 6 months

Mr. Gounder—Not more than 5 months, so far as the kind of paddy that we are growing is concerned. But this crop of sugarcane takes nearly a year for maturing. We can have two crops of paddy for instance within the period we take to reap the sugarcane. Further we will get some income in the interval. The more a man has of capital and of facilities for waiting a long time, the more he invests upon this costly cultivation and more profit he gets. An average riyat who is not able to wait so long has to depend upon short period crops

Dr. Matthai—I understand your point really is that with regard to sugarcane crop as far as the small cultivator is concerned, he has got to wait a long time before he is able to realise the money that he has put into it, whereas with regard to a crop like paddy he can realise the money in a much shorter time

Mr. Gounder—Yes

Dr. Matthai—What we are anxious to get is some fairly reliable data for judging the relative profit to the cultivator from these two crops, viz., sugarcane and paddy

Mr. Gounder—I shall give you a statement on those lines later on

President—This Rs. 400 that you were speaking of includes, I take it, the cost of manufacturing jaggery

Mr. Gounder—I think that figure is correct

President—You have 5 acres under sugarcane cultivation

Mr. Gounder—Yes

President — Do you vary your acreage?

Mr Gounder — Yes

President — What is the maximum you had on sugarcane?

Mr Gounder — That was the maximum

President — What would be the minimum?

Mr Gounder — 2 acres

President — When did you have 5 acres?

Mr Gounder — Two or three years back

President — What induced you to increase your acreage from 2 to 5?

Mr Gounder — When I found that the price had gone up, I increased the acreage

President — Did the price go up two or three years ago?

Mr Gounder — The price was to some extent high

President — Perhaps the conditions were different in Madras

Mr Gounder — In one particular year we find great variations. At the time of harvesting, our price is very low. The harvesting season for this area is about March and April. At that time the price is very low. About September or so, we get a little increased price

President — Do you keep your *gur* then?

Mr Gounder — I keep my *gur* under very great difficulty. I used to consult the experts here about the keeping quality of the *gur*. I have asked them to help us by making some experiments on the *gur* as to how the keeping quality of the *gur* can be improved but they have not been able to do anything

Dr Matthai — Precisely what is the difficulty about keeping *gur*?

Mr Gounder — It gets watery during the monsoon

President — It absorbs water

Mr Gounder — Yes. A man must keep it under very careful conditions, otherwise he can't find a buyer. That is a difficult matter for a man to arrange

Dr Matthai — Generally in your area when is the sugarcane crop harvested?

Mr Gounder — February to April

Dr Matthai — You said in answer to a question by the President that during the past few years you had occasion to raise your acreage from 2 to 5 and you said partly it was the result of the price of *gur* going up, can you give us some idea of the period when the prices were higher during the last few years?

Mr Gounder — It was about three years back, about 1925 or 1926, I think

Dr Matthai — Was there any particular reason why the prices went up?

Mr Gounder — That is not possible for me to say

President — Was it a good crop when the prices were high?

Mr Gounder — It was ordinary crop

President — You had good crop during the year when you had two acres under cultivation?

Mr Gounder — No, I think the outcome would be the same, as the other years

Dr Matthai — Is your *gur* sold in the Coimbatore town?

Mr Gounder — It is sent to the Malabar side and to some extent to the Nilgiris and if it is ball jaggery it is exported to the Nizam's Dominions

Dr Matthai — That is to say dealers come and purchase your *gur* and sell there?

Mr Gounder —Yes, and it is only at that time that we get a better price

President —Does the price depend on a good crop? That is to say in years when you have a very good crop, do you get a lower price?

Mr Gounder —The price does not vary on account of larger outturn or smaller outturn. It depends on the demand we get from outside.

Dr Matthai —Supposing in a particular season there was a relatively small crop, then obviously the amount of *gur* that would be available in the market would be less. That reduction in supply might tend to raise the price. But you don't think that that is the reason, do you?

Mr Gounder —I don't think so because jaggery comes from other places also and the distillers people get jaggery from palmjira.

Dr Matthai —Would you say that the price of white sugar has any effect on *gur*?

Mr Gounder —Yes. The price of white sugar has come down below the price of *gur* sometimes.

Dr Matthai —If the price of white sugar falls—it has been falling steadily during the past two or three years—then do you have a corresponding fall in the price of *gur* round about these places?

Mr Gounder —There might be a corresponding fall.

President —You were saying just now that the price of jaggery has been fairly constant for the last five years, that it has not varied very much.

Mr Gounder —The prices vary only within the year.

President —The price now is very much the same as it was five years ago, that is to say about Rs 2-8 0 per Madras maund so that there has not been any great reduction recently.

Mr Gounder —That is so.

Dr Matthai —Take a town like Coimbatore where you have a large class of people who use white sugar. If the price of white sugar rose then I suppose some of these people might think of taking *gur*, might they not?

Mr Gounder —Yes.

Dr Matthai —And consequently to some extent the price of *gur* might also go up.

Mr Gounder —It might rise but that won't be very appreciable because the class of people going in for *gur* won't be very large, and on that account it would not mean a higher price for *gur*.

Dr Matthai —Speaking from my own observation, the class of people who consume *gur* are people who apparently would want *gur* and not white sugar, that is to say, there is a class of people who only consume *gur* and there is another class of people who only want white sugar. In other words the two classes of people are largely different.

Mr Gounder —There may be a large number of people who have a sentiment not to use white sugar but that won't make any appreciable change in the price.

Dr Matthai —Your own impression as one who has been in this business is that the price of white sugar has very little effect on the price of *gur*.

Mr Gounder —I think gradually these people who have some sentimental objection to the use of white sugar will begin to take white sugar and then in course of time it will seriously affect the price of jaggery, but at the present moment the prices are quite distinct. The tendency however, seems to be that the price of white sugar is going down to the level of the price of jaggery or even less which will make people take more white sugar.

President —Do they use white sugar for manufacturing Indian sweets?

Mr Gounder —In the village parts white sugar is not very much used but in towns it is mostly white sugar.

President—If the price of white sugar dropped below the level of jaggery, in cities at any rate the sweetmeat manufacturers are sufficiently advanced to seize the opportunity of using white sugar, are they not?

Mr Gounder—That is my experience, that if the price of white sugar comes down to the level of jaggery sweetmeat shops in big villages and towns go in for more white sugar.

President—The point really is that as soon as white sugar drops to the level of jaggery white sugar is liable to be substituted by sweetmeat makers for jaggery. Is that correct?

Mr Gounder—Yes. As it is, they are now using more and more white sugar in large cities, its use is gradually spreading now.

Dr Matthai—What is the present price of gur?

Mr Gounder—Rs 2 per maund.

Dr Matthai—And the price of white sugar?

Mr Gounder—It will be about Rs 3 per Madras maund.

Mr Venkattraman—I can give you the relative prices as they stood in Coimbatore on 4th June 1930.

Per maund of 25 lbs

	Rs	A
Crystal sugar	9	4
Brown sugar	4	0
Jaggery cubes (good quality)	3	8
Lump inferior	2	0

Dr Matthai—Brown sugar is sweeter, is it?

Mr Venkattraman—Yes.

Dr Matthai—It necessarily follows that brown sugar has more sucrose content, does it not?

Mr Venkattraman—It might contain more invert sugar. People need use less of brown than of crystal sugar for making the same quantity of sweets.

Dr Matthai—Taking the market as a whole brown sugar sells at a lower price than crystal sugar. Don't confine yourself to Coimbatore. Obviously brown sugar would be classed at somewhere below 10 D S, would it not?

Mr Venkattraman—I don't know what is meant by brown there.

President—You are quite definite in your statement, are you not, that the price of gur does not depend upon the crop?

Mr Gounder—Yes.

President—Then how would these big merchants set about buying it? Do they go round seeing the cultivators?

Mr Gounder—No. They employ middlemen.

President—Are there middlemen established here in Coimbatore?

Mr Gounder—Yes.

Dr Matthai—Take a village round about Coimbatore where they use gur for all the things in which sweet stuff is required. Supposing in Coimbatore where they use white sugar for sweet stuff the price of gur goes down, that must have an effect also on the price of gur in the villages.

Mr Gounder—Certainly.

Dr Matthai—Similarly, if you take it the other way about, supposing you are able to get a higher price for gur in the town the same effect must to some extent show itself in the villages too. It may not happen immediately but in the long run the price in the villages and the price in the towns must correspond.

Mr. Gounder —Yes, that will adjust itself. If the price of white sugar falls down suddenly there would be a demand for white sugar and the price of jaggery will come down.

Dr. Matthai —What is the feeling amongst the sugarcane cultivators in Coimbatore now, is it more profitable now than before?

Mr. Gounder —Sugarcane is a profitable cultivation, that has always been the feeling. At times of course a feeling that it is not profitable comes but when the market goes up that disappears. When the market fell considerably some people gave up sugarcane cultivation altogether.

President —When was that?

Mr. Gounder —That was about 10 years ago.

President —What was the reason?

Mr. Gounder —The price of jaggery went down by about a rupee a maund.

President —Why?

Mr. Gounder —Because nobody would buy.

President —Does that mean you had more sugarcane crop in that year?

Mr. Gounder —Not too much. It might vary by a few hundred acres. The average riyat cultivates 2 to 2½ acres. But it may be as much as 4 acres for a single month well. The maximum amount of cultivation that a riyat does depends on water conveniences.

President —Speaking generally in Madras the acreage under sugarcane is not likely to vary very much one way or the other. It depends on the conveniences the cultivator has for irrigation.

Mr. Gounder —That is correct.

President —Supposing the price goes up to Rs. 6 per Madras maund and everyone starts digging wells then the area under cultivation would increase, would it not?

Mr. Gounder —They won't do it rashly because they have experience that any moment the price may fall.

President —Supposing for three years it is kept up at Rs. 6 per maund?

Mr. Gounder —Even then the average acreage may increase to 2 to 3 acres in each case because he believes there is a larger demand and consequently a larger margin of profit. That is all.

President —Your view is that if there was a very big rise in the price there might be a little expansion but if there was a very low price like one rupee, the acreage might fall off?

Mr. Gounder —Yes.

President —Speaking generally if there were no extremes in the price the area under sugarcane cultivation might remain the same.

Mr. Gounder —Yes.

Dr. Matthai —Are you interested in the question we are enquiring into at all? The question we are asked to consider is whether it is necessary to assist the sugar industry in India by means of protection, that is to say by a higher duty or by means of a bounty and the kind of sugar to which particular reference is made is white sugar. Now as one who is interested in the cultivation of sugarcane and in the manufacture of gur, would you ask us to give protection to white sugar?

President —If we put up the duty on white sugar to any considerable extent that might or might not affect you. Assuming that it affected the price, we will say that it went up by Rs. 8 a maund. Would that help you so far as gur is concerned?

Mr. Gounder —I think it would help us.

President —How and to what extent?

Mr Gounder—We will induce the local people to manufacture white sugar

Dr Matthai—Is there any manufacture of white sugar in Coimbatore?

Mr Gounder—There was one factory which closed down on account of the competition from foreign countries

Dr Matthai—How long ago was it working?

Mr Gounder—It worked a year or two. It was not able to sell the manufactured article. As soon as the factory began to work the price was considerably reduced and the result was that the factory could not sell the stuff in the market

President—If you had a number of sugar refineries, duty on imported sugar might enable you to sell your sugarcane for a better price

Mr Gounder—Yes

President—Assuming that there are no refineries and that you contemplate manufacturing sugar, I am doubtful myself whether an import duty on white sugar will help you to get a better price for *gur*. It seems to me from what you have said that the price of *gur* is more or less customary. That is to say it does not depend on the price of white sugar to any great extent

Mr Gounder—The demand will be more

President—That is with reference to the future. Speaking of the present, from what you have said it would appear to me that the increased duty on imported white sugar would not necessarily increase the price of *gur* and give you an advantage. It would be necessary to start refineries and refine sugar before any great advantage could be secured

Mr Gounder—*Gur* is also used in the manufacture of sugar. These factory people have got jaggery

Dr Matthai—Which factory people are you referring to?

Mr Gounder—I am referring to the factory which could not sell their stuff in the market

Dr Matthai—In Nellikuppam where they have a sugar factory, do they get jaggery from your area?

Mr Gounder—No

Dr Matthai—So that all the jaggery that is bought from Coimbatore and say places like Mysore and Malabar is meant entirely for direct consumption

Mr Gounder—A larger quantity goes to the distillery. In Nilgiris there is a distillery, in Hyderabad State there is a distillery. A small quantity is also sent to Tinnevely for distillery purposes. Ball jaggery is mostly used for making rusc. Ball jaggery superfine quality is sent to Madras to be sold there for eating purposes

Dr Matthai—Roughly have you any idea now how much jaggery produced in these parts is used for distillation purposes?

Mr Gounder—Nearly half

Dr Matthai—So that that would have a very considerable bearing on the price

Mr Gounder—Yes

President—Just to return to this question of the duty on white sugar, apart from the sale of *gur* to sugar factories or the sale of sugarcane to refineries, supposing there were no factories or refineries here at all, would a duty on white sugar actually help you to get a better price for *gur* because from what you have said it seems to me that the price of white sugar does not affect the price of *gur* at any rate until it falls below the price of *gur*

for the manufacture of white sugar, we will gradually in course of time

Mr Gounder—It will help us in this way. If no manufactory is started

get a better price. I think some help may be given towards the improvement of local sugarcane.

President—Your point really is before any assistance by way of tariff can help the actual grower of sugarcane, it will be necessary to establish refineries or sugar manufacturing.

Mr. Gounder—I am not very much in favour of large scale sugar factories. What I am very much interested in is in finding methods of small scale manufacture of white sugar, because so far as I understood from the Sugar Committee Report, so many conditions are necessary for the manufacture of white sugar on a large scale profitably. Such conditions are difficult to fulfil so far as Southern India is concerned. Southern India is a land of small cultivators and varied nature of soil and climates. Although we grow a larger area of sugarcane in every district, a large scale manufacture is a very costly thing. Here the land conditions are quite unsuitable, because the land is scattered.

Dr. Matthai—Manufacturing white sugar on a small scale would be very expensive.

Mr. Gounder—That is what I am placing before the experts and other people. Government should undertake the investigation of manufacturing white sugar on a small scale as a sort of cottage industry.

Dr. Matthai—If you are interested in helping the small cultivator is it not better to turn at the manufacture of gur on a small scale by improved methods rather than the manufacture of white sugar?

Mr. Gounder—That also can be done.

Dr. Matthai—There is considerable room for improvement in the manufacture of gur.

Mr. Gounder—Yes, improving the keeping quality is itself improving the quality of gur. The best jaggeery keeps on for a longer time than an inferior jaggeery. That all depends upon soil conditions.

Dr. Matthai—Are you in favour of replacing gur gradually by white sugar? That is to say are you definitely in favour of encouraging people to eat white sugar rather than gur?

Mr. Gounder—If we are not able to get outside sugar and if we are able to manufacture sugar in our own country, then I am for encouraging.

Dr. Matthai—Assuming that both white sugar and gur are made in this country you will be quite definitely in favour of encouraging people to eat white sugar in preference to gur.

Mr. Gounder—It depends on how people acquire a taste.

Dr. Matthai—You have read the Sugar Committee's Report.

Mr. Gounder—Not thoroughly.

Dr. Matthai—The view that theorists like Rao Bahadur T. S. Venkatraman take is that there is a great deal of wastage of sugar stuff in the manufacture of gur. There if you could make white sugar rather than gur you would be saving all the sugar stuff.

Mr. Gounder—So long as people have a liking for jaggeery, there is not much to be thought of in wastage unless it is a very inferior kind of gur.

Dr. Matthai—I suppose the Sugar Committee's estimate is that under present conditions of gur manufacture in this country nearly one million tons of sucrose are lost.

Mr. Gounder—That is our experts' view. With that I don't agree. That is like a machine manufacturer saying that there would be so much percentage of loss if one used the crude country made mill and that if his mill is used, it would produce so much more.

President—You don't believe that there is much wastage in jaggeery manufacture.

Mr Gounder —No. What we want is some help. If you are running an institution for the benefit of the ryot and when we point out the defects, you should come to us and set them right.

Dr Matthai —You were speaking of 300 acres of land belonging to you which are cultivated by tenants.

Mr Gounder —Yes.

Dr Matthai —I take it all the 300 acres are under sugarcane.

Mr Gounder —Out of the area which I have, 300 acres are under my tenants at one season of the year. The acreage of the whole land is 1,000 acres.

Dr Matthai —And the rest of the land is used for other grain crops.

Mr Gounder —Yes, paddy, cholam and tobacco.

Dr Matthai —I suppose it is entirely open to him to put his land under sugarcane or other crops.

Mr Gounder —Yes, for the payment of rent, he keeps the sugarcane crop.

Dr Matthai —It is the only cash crop.

Mr Gounder —Yes.

President —Does he not sell the rice? he keeps for his own domestic consumption.

Mr Gounder —No. He doesn't sell his cholam. The other grain crops.

Dr Matthai —Is that universal more or less in Madras?

Mr Gounder —That is prevalent in Coimbatore.

President —Sugarcane is the only cash crop.

Mr Gounder —And Cambodia crop.

President —What about groundnuts?

Mr Gounder —It is mostly dry and not irrigated.

Dr Matthai —In this particular area of 300 acres cultivated by your tenants, the only cash crop is sugarcane.

Mr Gounder —Yes and next to that is Cambodia.

Dr Matthai —Is Cambodia cotton cultivated by your tenants?

Mr Gounder —Yes. The Cambodia cotton is utilised for producing cotton seeds and concentrated food for the cattle. The grain crop is for his own living.

Dr Matthai —So long as sugarcane is the only cash crop, they are bound to cultivate it.

Mr Gounder —Yes.

Dr Matthai —Unless of course the profits of *gur* are so low that the price he gets does not cover his out of pocket expenses. Unless the position becomes so bad, he is bound to cultivate sugarcane. That is the only way in which he can pay his rent.

Mr Gounder —Yes. He will continue growing sugarcane until its cost of cultivation and his income will tally.

President —That is to say until *gur* is Re 1 a maund.

Mr Gounder —Yes.

President —Re 1 a maund will just cover the expenses.

Mr Gounder —If it is less, he will reduce the area under sugarcane cultivation and grow some other crop which will give him a better income.

Dr Matthai —Taking the southern districts of the Presidency, as a whole, is it generally true to say that in these districts sugarcane is the main cash crop. Next to sugarcane comes cotton, but principally sugarcane.

Mr Gounder —By southern district, you mean what districts?

Dr Matthai —I have been told that the two most important sugarcane areas in the Madras Presidency are Godavari and Vizagapatam in the north,

South Arcot and Coimbatore in the south. There is no sugarcane cultivation in any of the Tamil districts.

Mr. Gounder —Not much.

Dr. Matthai —Would it be true to say in these areas that sugarcane is the principal cash crop?

Mr. Gounder —Yes.

Dr. Matthai —Would it be true to say that a man needs to grow sugarcane in order to be able to discharge his money obligations?

Mr. Venkataraman —Yes.

President —Would it also be true to say that if the price of sugarcane does not drop below one rupee a munda, subject to seasonal variations, the area under sugarcane would remain much the same?

Mr. Gounder —Yes.

President —Rao Bihadur, would you give us for record an account of your work at the Coimbatore farm? When did you actually start work on improved canes?

Mr. Venkataraman —We started work in the year 1912, and it was not till the year 1918 we were able to send out any canes for testing to the provinces. When we started work, we naturally concentrated upon producing a cane for sub-tropical India because over 80 or 85 per cent of the Indian area is in the sub-tropics. Therefore we started trying to breed an improved cane for that area. By 1918 we were able to send out the first batch of canes for trial and by about the year 1924 or so a few of our canes had taken hold on the cultivators.

President —In what particular area?

Mr. Venkataraman —Chiefly in Bihar. Our work began to tell first in Bihar. It began to tell there first because in Bihar we have the enlightened indigo planters who had lost the indigo and who were looking out for a really profitable crop to grow. They found these Coimbatore canes quite handy and useful and therefore the Coimbatore canes built up their reputation first in Bihar and next to Bihar these canes came into prominence in the Punjab because I had a lot of cordial help from the Punjab Department in those days and even now. Later on, these canes began to show a good performance in the United Provinces as well.

President —By what date did you get an appreciable area under your improved canes in India?

Mr. Venkataraman —I do not know what you mean by "appreciable."

President —Five per cent of the total acreage?

Mr. Venkataraman —Even now it is only 10 per cent under improved canes, and the bulk of these improved canes are Coimbatore bred seedlings.

President —When did you get to five per cent?

Mr. Venkataraman —I would put it about three years back.

President —You now work up to 10 per cent.

Mr. Venkataraman —Yes.

Dr. Matthai —It is 10 per cent of the total area under sugarcane in India.

Mr. Venkataraman —Yes.

Dr. Matthai —The total area under sugarcane is roughly how much?

Mr. Venkataraman —Roughly 2½ million acres.

Dr. Matthai —Then the area under your canes is roughly about 800,000 acres.

Mr. Venkataraman —Yes, near that figure.

President —Mainly in Bihar?

Mr. Venkataraman —The largest concentration of sugarcane area is in the United Provinces. Once the cultivators knew of these canes they began

to spread more rapidly in the United Provinces than in Bihar or the Punjab—The area under Coimbatore cane is now largest in the United Provinces

Dr. Matthai—What is the percentage of the area in the United Provinces of the total?

Mr. Venkatraman—The sugarcane area in the U P is about 45 per cent of the total Indian area

President—The average production of jaggery per acre with the ordinary canes and not the improved variety is something under a ton

Mr. Venkatraman—For the whole of India, the average is about a ton

President—For your improved variety, you reckon at over 2 tons

Mr. Venkatraman—Easily two tons. In some cases we had even 3 tons

President—Assuming that the demand for jaggery has remained constant, it would not be surprising to find, to the extent to which these new canes have been introduced the total acreage under sugarcane has slightly gone down, because the same amount of jaggery can be produced in less acreage

Mr. Venkatraman—Granting that the demand for jaggery is constant?

President—Yes

Mr. Venkatraman—But it does not look that it is constant, the demand for jaggery or sugar

President—The demand for sugar is increasing

Mr. Venkatraman—Even the demand for jaggery has already increased, I mean the consumption of jaggery has increased

Dr. Matthai—We have no reliable data as regards the production and consumption of jaggery. I think the way in which the Agricultural Departments make the statistics is that they take the total acreage, make some allowance for seeds and so on and some allowance for white sugar and say that what is left must produce jaggery at this particular rate

President—Perhaps they check the outturns in certain selected areas and calculate on that basis

Mr. Venkatraman—In the United Provinces they have recently tried to work out figures with greater accuracy with regard to the improved canes especially in Rohilkhand Circle

Dr. Matthai—It would be of considerable help to us in the course of this enquiry if we could get some reliable figures as to the extent to which your improved canes have helped to raise the output of sugar

Mr. Venkatraman—Do you mean white sugar?

Dr. Matthai—Yes. You say that your improved canes have been adopted on a fairly considerable scale for three or four years now. Would you be able to collect some figures for us?

Mr. Venkatraman—I could

Dr. Matthai—The figures should show the tonnage of cane per acre both under your cane and under the old canes

Mr. Venkatraman—I shall get the information and send it on to you

Dr. Matthai—If you could collect the information for three or four years, it would be useful

Mr. Venkatraman—Do you want that in the white sugar belt or in the gur belt?

Dr. Matthai—Both if possible

Mr. Venkatraman—Yes

Dr. Matthai—It would also be helpful if you could give us figures to show not merely the tonnage of cane but also the tonnage of sugar per acre

Mr. Venkatraman—The tonnage of sugar would be rather difficult because in a factory at present only a portion of the supply is drawn from Coimbatore canes and they do not maintain separate figures

Dr. Matthai—There is no factory which works entirely on Coimbatore canes.

Mr. Venkatraman—There are factories which work on Coimbatore canes in the beginning of the season but later on they get mixed up.

President—Factories might be able to give us that information.

Mr. Venkatraman—Yes. The Samastipur factory was once run for a time almost entirely on Coimbatore canes. A factory like that may help you.

President—The output in Java canes is how much per acre?

Mr. Venkatraman—5½ tons of sugar per acre.

President—What will that be in cane?

Mr. Venkatraman—Roughly 45 to 50 tons.

President—The output of the cane normally in India is about 11 tons and the output of your improved cane is about 30 tons.

Mr. Venkatraman—Yes. If you want a safe figure, you might put it at about 20 to 30 tons from the Coimbatore canes.

President—What is the sugar output?

Mr. Venkatraman—From these Coimbatore canes?

President—Yes.

Mr. Venkatraman—Two or three tons.

Dr. Matthai—Per acre?

Mr. Venkatraman—Yes.

President—Against 5½ tons in Java?

Mr. Venkatraman—Yes.

President—Do you think that it would be possible to reach the Java figure in India?

Mr. Venkatraman—Even now if you allow for the shorter period in India we are not far behind Java.

President—In Java it takes 18 months.

Mr. Venkatraman—12 to 18 months.

President—In India?

Mr. Venkatraman—The actual growing period is 6 months, though the crop is in the ground for nearly a year. On that basis we are not very far behind. But I am quite hopeful that we can do in India for India what it has been possible for Java to do.

Dr. Matthai—Suppose we take the Java rate of production as about 50 tons of cane per acre, if out of that they are able to make about 5½ tons of sugar, that is roughly about 1/9th or 1/10th.

Mr. Venkatraman—Yes.

Dr. Matthai—Does the same proportion hold in the case of your improved canes?

Mr. Venkatraman—It is very nearly equal to Java now.

Dr. Matthai—On what kind of figures do you base your statement?

Mr. Venkatraman—On the data from factories. It is only factories that can give you figures in that direction.

Dr. Matthai—What I am trying to understand is this. You are now telling us as a result of your improved canes that it has been possible for factories to extract as much as 10 per cent of their cane in the form of sugar.

Mr. Venkatraman—Yes. The highest recovery in 1927-28 was even 11.5 per cent and six factories exceeded 9 per cent. Average being about 8.5 per cent.

Dr. Matthai—I take it as a scientist you make that statement because you have certain data.

Mr Venkataraman —Yes

Dr Matthai —What precisely are your data?

Mr Venkataraman —I go to the factories and get into personal touch with the factory managers and ask them and then they give me the information. You would find such information in the reports of the Secretary, Sugar Bureau, for example that for 1928-29

Dr Matthai —One of the things that you are aiming at is besides increasing the output of cane per acre to reduce the duration of the crop that is to say you are trying to evolve new canes which would mean harvesting sugar in a much shorter period

Mr Venkataraman —I would not put it quite that way

Dr Matthai —How will you put it?

Mr Venkataraman —I will explain. The average number of working days in the case of Java factories is about 126. The number of working days in the case of factories in India is sometimes as low as only 60 and in some factories probably it is round about 100. The larger the number of working days, the less the overhead charges. Till very recently, that is, till the Coimbatore canes were in cultivation in Northern India, the local canes would not mature earlier than say the middle of December and even during the middle of December the local canes were not fully ripe with the result that perforce the factory had to crush unripe canes in the beginning of the season, overripe canes at the end of the season and normal canes during the middle of the season. Most of the local canes are late maturing. One of the things we attempted was to try and spread out the crushing with a view to reducing the overhead charges to see if we cannot make the factory run for a larger number of days and now we have good seedlings which mature as early as the 31st week of November

Dr Matthai —Seedlings which have been planted at the same time as the other?

Mr Venkataraman —Yes, these early canes have been secured by breeding

Dr Matthai —When is the planting season here?

Mr Venkataraman —Roughly February middle or March for the whole of India

Dr Matthai —The old canes mature some time in January

Mr Venkataraman —Yes

Dr Matthai —You are trying to evolve a cane which would mature some time in December or early in November

Mr Venkataraman —We have succeeded in doing so

Dr Matthai —So that you are able to get your harvesting of cane from December on to March

Mr Venkataraman —Yes

Dr Matthai —That gives you 100 to 120 working days

Mr Venkataraman —Yes. In fact one season Samastipur was working entirely on Co 214, the factory offering a premium on this particular seedling. Even now, factories are prepared to offer premium on this particular seedling because it matures early and the output is better in the factory. But it is not very good in tonnage, that is why the grower does not like it

Dr Matthai —In the sub tropical area in the United Provinces, the sugar cane is in the ground for a shorter period than in a tropical area like Coimbatore

Mr Venkataraman —Yes

Dr Matthai —They harvest sooner, don't they?

Mr Venkataraman —They begin harvesting sooner

Dr Matthai —Therefore the problem of interrupted working is not so serious in their case as in the tropical areas, that is to say I take it that in the United Provinces and areas of that kind you could depend upon getting

a continuous supply of sugarcane for three or four months because the sugarcane matures earlier. Am I right?

Mr. Venkatraman — I do not quite catch you. Not 4 to 5 months.

President — Three to four months.

Mr. Venkatraman — You can put it as 3 to 4 months.

Dr. Matthaï — Am I right in suggesting that continuous working is easier in the United Provinces than in Madras?

Mr. Venkatraman — In Madras there is not much experience.

President — Take Java. Their crop takes 12 to 18 months.

Mr. Venkatraman — Yes.

President — For how many months would a factory be able to work on one crop?

Mr. Venkatraman — Their working period is 126 days on an average in Java.

President — In 18 months?

Mr. Venkatraman — 126 days during a particular part of the year.

President — How do they manage? How do their crops mature?

Mr. Venkatraman — Crops of different ages mature at one and the same time. The question of maturity does not depend entirely on the age of the crop but on the season. The weather conditions must be such as to induce maturity in the crop.

President — What is the reason that they are able to work for a longer period in Java than in India?

Mr. Venkatraman — They have got a better set of canes. The factory has got absolute control over the field. I will just contrast the two positions. In the case of a Java factory, the factory grows the cane. The factory superintendent goes to the field, samples the canes and marks out exactly the particular plot which has to go into the factory according to a particular series to-morrow, day after to-morrow and so on. In Northern India, the factory has absolutely no control over the cultivator or over the kind of cane, ripe or unripe, which the cultivator dumps into the factory. That is a disadvantage.

Dr. Matthaï — In Java what period do these 126 days cover?

Mr. Venkatraman — I cannot tell you exactly. But it works. I think starting round about June.

Dr. Matthaï — The shipments to India from Java start in July or August.

Mr. Venkatraman — Yes.

President — You say one crop in Java takes 18 months. Then, a factory in a country where it takes 18 months would work fewer days than a factory in a country where the crop takes 12 months to mature. Is that correct?

Mr. Venkatraman — Probably I have not made myself clear. It is not that the Java crop takes 18 months. The Java factories will be crushing canes 12 months old and 18 months old during the same period. When weather conditions are propitious for ripening crops 12 months and 18 months old mature at the same time.

President — That is not so in India?

Mr. Venkatraman — The maturing time in Northern India is during winter.

Dr. Matthaï — The difference between Java and our Indian factories in the matter of continuous working is partly due to the circumstances you mention. But really it turns upon the system of control that the factories have over the grower.

Mr. Venkatraman — Yes.

Dr. Matthaï — Where you have not the means of controlling, continuous working becomes exceedingly difficult.

Mr Venkatraman —That is so

Dr Matthai —I quite admit that it is partly a question of evolving cane that will mature at the right time and give you sufficient opportunity for continuous working but it is also a question of ensuring agricultural control

Mr Venkatraman —Yes

President —Given some control could the factories here work their factories throughout the year?

Mr Venkatraman —No Factories in Bihar or the United Provinces can work longer than in the Punjab The cold in the Punjab is extreme and it is not so suitable for cultivation of cane as the United Provinces

President —Would you say that India has any natural advantages over Java in the matter of cane cultivation?

Mr Venkatraman —Java has got an advantage with regard to climate but in Bihar and the United Provinces we can ultimately grow sugarcane cheaper than in Java, I expect

President —The reason being that the period of growth is shorter?

Mr Venkatraman —Not that In Java they have got to go in for a lot of irrigation and they have to engage a lot of manual labour whereas in parts of the United Provinces you can grow cane sometimes even on one or two irrigations

Dr Matthai —But it is generally assumed that labour is cheaper in Java?

Mr Venkatraman —We tried to get at the real facts but it is rather difficult to get it The whole thing is so complicated by the system of leasing and that sort of thing We cannot say exactly whether it is cheaper in Java or not

President —Then the natural advantage lies in the nature of the soil and the climate in the United Provinces?

Mr Venkatraman —We can grow cane with much less irrigation in the United Provinces than in Java

President —And the soil?

Mr Venkatraman —Yes In fact I think ultimately we shall be able to grow cane cheaper in Bihar and the United Provinces than in Java

President —What about Madras?

Mr Venkatraman —It is different It is paddy land and in Coimbatore we have to irrigate our crop once a week or every 10 days

President —Then it is not so suitable for sugarcane?

Mr Venkatraman —I would not say that If we compare the high yields probably Madras and Bombay are more suitable but it is comparatively cheaper to grow cane in the United Provinces and Bihar After all we have to cut down the cost of cultivation per maund of cane otherwise we shall not be able to make headway in the sugar world

President —Why is it costly in Madras?

Mr Venkatraman —You have to irrigate the cane often. When you have a well you have to lift the water In fact in my station we have to work an engine to irrigate the cane

Dr Matthai —You kindly promised to give us some figures to show the improvements effected by your new canes Probably you might give us some fairly exact figures with reference to the point raised by the President to show the increase in the area under Coimbatore cane from year to year during the past five years, from 1925 to date for example

Mr Venkatraman —Yes

Dr Matthai —Which are Coimbatore canes that have proved successful?

Mr Venkatraman —Co 205, in the Punjab, Co 205, Co 213 and Co 214 in the United Provinces and Bihar; also Co 210 in Bihar and recently Co 290 is proving useful in the United Provinces and Punjab and also in certain portions of Bihar

Dr Matthai—How many types altogether?

Mr Venkatraman—Say half a dozen

Dr Matthai—I take it that these five years when you have been trying to push your canes in the rivers in Northern India you had naturally a certain amount of criticism in the beginning. Can you give us some kind of idea of the lines on which these criticisms proceeded? I will tell you precisely the point I am trying to get at. Reading through the evidence given before the Royal Commission on Agriculture I gather that one of the criticisms made in the earlier years about some of your canes was that after a few years they seemed for some reason to deteriorate and the original qualities to some extent disappeared after a few years. That was one of the points but probably you have heard these criticisms and I have no doubt you would be able to tell us what the position really is.

Mr Venkatraman—I don't think there has been anything like deterioration in the quality in these canes. But there is one thing which has happened and that is this. The Coimbatore canes were new in the field, specially in Bihar. The local canes were giving rather low yields. When they found that the Coimbatore cane gave more yield they began to sow these canes not only on the kind of lands which were suitable but also on the inferior kinds of lands for which these are not suitable and unfortunately in one sense we were responsible for this. It is this way we have certain seedlings for example Co 205 which can grow even under very indifferent conditions but these are inferior in quality to the other kinds. That induced the people to carry these canes not only to the proper sugarcane land but also to other places, and in the wrong places they certainly did not get the same yield which they expected from the genuine and right type of cane sown on the right type of sugarcane land. Apart from that I don't think there is any evidence of deterioration yet of these Coimbatore canes.

Dr Matthai—You get reports about the actual results of your canes from the Directors of Agriculture?

Mr Venkatraman—Yes, from the officers of the Agricultural Department.

Dr Matthai—Can you tell us how exactly you maintain contact with those areas where your new canes are tried?

Mr Venkatraman—The chief way in which I maintain contact is personal tour to those places once a year, either myself or my staff, I have personal touch with the departments of agriculture and sometimes with the cultivators also.

Dr Matthai—I suppose if you have sufficient assistance and co-operation from the department of agriculture, it would be of very considerable help to you.

Mr Venkatraman—It would be.

Dr Matthai—It would be possible for you to work upon the cultivators and the factories through the officers of the Agricultural Departments?

Mr Venkatraman—But the present understanding between me and the Agricultural Department is this. You know how the provinces are touchy about the activities of the Central Government. They have a feeling that we are encroaching. Whether it is for their good or not is a different matter, but the feeling is there and the understanding—and I have been able to get on nicely with the provinces on this understanding—is that I produce the cane and then send the cane to the provinces. I visit the provinces, try to know all I can about the canes with the object of adjusting my breeding programmes but with regard to the further propagation I leave it to the provincial departments. They are the best to do it, they are most competent to do it and that is the best way of doing it also. For example, supposing a cultivator from the United Provinces asks me for cane, I wire to the Director of Agriculture "Mr A has asked for an amount of Co 290 cane, would you like me to send it?" Sometimes he says yes or if

he has got the cane he will say "I will supply the cane myself" I must be very careful not to tread upon the corns of the local departments!

Dr. Matthai—Supposing we ultimately come to the conclusion that protection should be extended to the Sugar industry, the extent to which it would be possible to raise the yield of the crop by the introduction of these new varieties is a question of very great practical importance. Therefore would you be able to tell us from that point of view whether there is any suggestion that you can make for improving the contact between your work here and these provincial areas where your canes are being tried? Is there any direction in which the present means of contact could be improved?

Mr. Venkatraman—There is one important direction in which, I would put it, a sort of lateral contact between my place and the provincial farms might be developed. That will be by my having special stations under my control in the chief sugarcane tracts.

Dr. Matthai—What precisely is the nature of work that you would do in these sub-stations?

Mr. Venkatraman—You saw the manner in which newly bred canes are being tested at my station. To continue the simile of this morning, now all kinds of high school courses and the collegiate course are done here. I would like to open collegiate classes in the provinces.

Dr. Matthai—That is to say you get your seedlings here and you plant the seedlings and up to a certain stage you keep them here?

Mr. Venkatraman—Yes.

Dr. Matthai—After that you would like the new productions to grow in the areas for which they are intended and for that it would be advantageous for you to have sub-stations under your control.

Mr. Venkatraman—Yes. In fact I believe that a development in that direction would speed up the breeding of improved canes for the provinces a great deal. Whatever I do here I have to recognize that in a sense it is unnatural. I have got the local canes of the Northern Indian provinces, but if I am able to compare my cane with the local canes in the province itself and get a closer touch with the local cane and the agricultural department it ought to help my work a great deal.

President—I take it there might be some difficulties. The provincial governments might be jealous of a Central Government department being placed in the middle of the provinces.

Mr. Venkatraman—That is likely. I have been trying to cultivate very friendly relations with the provinces and to see if I could not get these things done through them. With regard to certain provinces our relations are quite cordial.

President—You were saying just now that in course of time the United Provinces would probably be able to produce as much sugarcane per acre as Java.

Mr. Venkatraman—Allowing for certain factors, yes.

President—In what sort of period do you think they would be able to work up to that position? How long do you think it would take to get the major area in India under Coimbatore sugarcane?

Mr. Venkatraman—The spread of the cane is left to the provincial departments and the provincial department in the United Provinces is one of the most efficient in spreading these canes because the Director of Agriculture there is a specialist in sugarcane and he is spreading it as quickly as he can. If you want to give me an idea of the period within which the majority of the area would be covered by Coimbatore cane, it would be more like an astrological prediction, but I should think in another 10 to 15 years.

President—The department is applying for protection and we have to consider for what period protection should be granted and that depends on the

period within which the Coimbatore Sugarcane Farm is able to push the distribution of these different varieties.

Mr. Venkatraman.—My impression of the question is that it should be at least ten years because people must know where they are. No capitalist who is fairly cautious would be prepared to lock up his money in a factory unless he knows that for ten years at least he is sure of his ground.

Dr. Matthai.—The Sugar Committee of the Imperial Council investigated the question of a *prima facie* case for protection in regard to sugar? You were on that Committee but I don't know if you are at liberty to tell us about the proceedings of that Committee.

Mr. Venkatraman.—I think they are confidential, but any question that you ask I can answer.

Dr. Matthai.—When your Committee decided to approach the Government of India to ask for protection for sugar, what aspect of the sugar industry were you most concerned about? Was it white sugar or *gur*?

Mr. Venkatraman.—If you would allow, I would rather drop the Committee altogether and tell you my own personal opinion.

Dr. Matthai.—Yes.

Mr. Venkatraman.—The first shock came to me when I heard rumours that Java had put into Bombay a trial consignment of *gur*. I was not unprepared for it.

Dr. Matthai.—How big was that consignment?

Mr. Venkatraman.—I suppose it was at least 500 tons. That is the rumour, but I have no definite idea. I was prepared for it for two reasons. The Java people were quite wide awake and they know how inefficient our *gur* industry is and it was obvious to them that they could easily compete with our *gur*. It so happened that year before last two experts from Java—I forget the names—one Director of Co-operation,—came to India and they were very anxious to try and know all about our *gur* markets, our tastes, our methods of manufacture and probably our costs and so on. A third reason which made me rather prepared for this shock was the fact that Java's eastern markets were gradually dwindling. Japan has now practically ceased to import sugar from Java. In the meanwhile Java was forcing up her production by application of science, by improvements in the method of manufacture and cultivation. Therefore one was reasonably prepared to expect that Java would do its best to try and sell as much as she can to India. With regard to white sugar there is a limit to our consumption. We could not absorb all that Java produced. Therefore it was but natural that Java should consider if on the *gur* market they could not compete with us.

Dr. Matthai.—This consignment arrived a year ago.

Mr. Venkatraman.—Yes.

Dr. Matthai.—It was a year before the arrival of the consignment that we had this visit from the Java experts.

Mr. Venkatraman.—Yes, about that.

Dr. Matthai.—Did you have an opportunity of examining the quality of this *gur* that was imported?

Mr. Venkatraman.—I saw it.

Dr. Matthai.—What was it like? Was it in a position really to compete with Indian *gur*?

Mr. Venkatraman.—Yes. They had succeeded in preparing jaggery which could keep. I saw it at Pusa. It went through the monsoon and apparently without deliquescing.

President.—Was it in cube?

Mr. Venkatraman.—It was a hard ball.

Dr. Matthai.—Have you any information as to how the market received it?

Mr. Venkatraman.—I am not in touch with that particular market.

Dr. Matthai.—Was it sold in Bombay?

Mr. Venkatraman.—Yes.

President.—Where could we get any information about it?

Mr. Venkatraman.—The officer from whom you might get all such information is the Secretary, Sugar Bureau.

Dr. Matthai.—This consignment arrived a year ago. There has been no further consignment.

Mr. Venkatraman.—That I don't know.

Dr. Matthai.—Taking the imports of sugar into this country in 1929-30, the class of sugar which is likely to compete with *gur* is sugar under 15 Dutch Standard and the total quantity under 15 Dutch Standard imported in 1929-30 was about 2,000 tons compared with a total of 8,00,000 tons, so that one thought on the basis of these figures there was no reason whatsoever for apprehension that our *gur* market would be attacked.

Mr. Venkatraman.—Yes. But my suggestion is that this is only a trial consignment.

President.—You don't know whether it was a successful consignment or not.

Mr. Venkatraman.—That is the trouble. We don't know. It must have been successful because the quality of the jaggery was all right.

President.—Why haven't they sent more?

Mr. Venkatraman.—I don't know.

Dr. Matthai.—What is the proposal that you make to us?

Mr. Venkatraman.—My request to the Board is that at all costs our *gur* must be protected.

President.—You propose a prohibitive duty on sugar below 8 Dutch Standard.

Mr. Venkatraman.—Yes. The life of our people is associated with the *gur* industry. It is not only a useful crop, it is not merely a very valuable link in the scheme of agricultural operations, it is not merely a cash crop, but I would almost call it a crop which contributes to the happiness of the people.

President.—Such prohibitive duty would really be a precautionary measure. It would not affect the price of *gur* at all.

Mr. Venkatraman.—It would not.

President.—So that what you are really suggesting is as a precaution against the possible inroad by Java, a prohibitive duty should be put on all imported sugar which competes directly with *gur*.

Mr. Venkatraman.—Yes. Australia has put an embargo on all imports. You cannot import any sugar in to Australia.

Dr. Matthai.—As regards white sugar, what do you suggest?

Mr. Venkatraman.—First of all let us examine the Indian situation. India with its very large area has got only about 30 factories working. With about 1/4th of the Indian area Java has got 149 factories. What does it denote? Our factories are not quite happy. Why more factories have not come into existence in spite of the large area in India?

Dr. Matthai.—As far as that question is concerned, probably the more effective solution would be no tariffs, but some kind of internal reorganisation of the industry. We have had for some time now a fairly high duty.

Mr. Venkatraman.—That was a revenue duty on which you cannot depend. You might drop it next year. If it was a protective duty for ten years, people know where they are.

President.—You suggest some sort of licensing arrangement.

Mr. Venkatraman.—I want to make it a more attractive proposition. We cannot go on like this for ever. We cannot think of a situation when

India will be dependent for more than 80 per cent. of her needs of white sugar on a foreign country.

Dr. Matthai.—I take it that you don't want any increase in the duty beyond the present revenue duty which is Rs. 6. Supposing it was decided by Government on our recommendation that this revenue duty of Rs. 6 should be made a protective duty and fixed for a period of 10 years, unless very considerable effort is made to reorganise the conditions of the industry, actually this duty might be a hindrance rather than a help.

Mr. Venkatraman.—That is true.

Dr. Matthai.—It is quite conceivable that in great centres of production in India like United Provinces and Bihar under the stimulus of such high tariff assistance, factories might grow up in areas where the supply of sugarcane is inadequate and the result is that overhead charges might go up and the conditions might be worse.

Mr. Venkatraman.—Of course there must be a well thought out scheme of building up the Sugar industry. During the period of protection there should be an intensive attempt to place our industry on a very sound and safe basis. The moment you withdraw the tariff, there will be almost a disaster. We could not think of a state of things like that.

President.—Do you suggest that new factories should be licensed before they are established?

Mr. Venkatraman.—I should think so. The details will have to be thought out, but I am in favour of confining the area in which each factory operates. There is another reason why I want protection for white sugar. I am in touch with growers. Before that I will tell you another thing. The shareholders of the Indian sugar factories are not happy. Many of them haven't got dividends. Therefore that makes it rather difficult for fresh capital to flow into white sugar. As to the reasons for that, I cannot say, but at present white sugar factories are not paying dividends. Then the third thing is about the grower. In my travels round India I have heard it said by large growers in Bihar that if the prices continue like this, they will have to drop the cane. By that I mean the prices paid by the factories for a maund of cane.

President.—It is about As. 5.

Mr. Venkatraman.—It is As. 5 to As. 5-6. They say it has just reached that limit and if things continue like that, they will have to give up cane growing. Now when you give protection to white sugar, I would suggest that you must take steps to see that a portion of this protection reaches the grower as well. The protection has to work through the factory.

Dr. Matthai.—If protection is by means of an import duty, what kind of control have we over the manufacturers of sugar? If it is a bounty, you can tell the manufacturer "I am not going to give you this bounty unless you pay a particular price to the grower of sugarcane." But where it is an import duty, it is like rain which falls on the just and the unjust alike. You cannot discriminate.

Mr. Venkatraman.—That is true. Some machinery will have to be thought of by which the grower will be benefited. You can couple it with licensing. If you are going to limit the area to a particular factory, you can put it as one of the conditions. I have not worked out the details.

Dr. Matthai.—I suppose the practical difficulties are much less in the case of a licensing system introduced in respect of a new factory in a new area. But if you take one of the existing factories surrounded by a sugarcane area which is in the hands of a number of small holders, it is rather difficult to introduce the licensing system.

Mr. Venkatraman.—I quite see the difficulty.

President.—Unless you are prepared to apply the Land Acquisition Act which is rather unthinkable.

Dr. Matthai.—I take it you have been in touch with the developments of thought in India on the question of developing sugar manufacture since the Sugar Committee reported. Has this question of licensing, allocation and so on ever received consideration?

Mr. Venkatraman.—Not much. I have heard the factory managers grumble, but nothing in the way of a constructive scheme.

Dr. Matthai.—I suppose the matter would be considered, now that there is an Imperial Council of Agricultural Research.

Mr. Venkatraman.—Yes. Unless the grower gets a little more than what he gets now, he may drop the cane altogether.

Dr. Matthai.—Are you in agreement with the formula proposed by the Sugar Committee, viz., half the price of sugar derived from a given quality of cane should go to the sugarcane grower?

Mr. Venkatraman.—I don't like to say that I quite agree. You will be in a better position to say that after you have examined the costs of the factories and their profits. I can express myself this way. I should like the grower to be treated as liberally as possible. I would only put it at that.

President.—Do you think that a tariff which increased the price of sugar would necessarily bring a higher price for cane?

Mr. Venkatraman.—I think it should. Even according to the formula of the Sugar Committee's Report, if the tariff is high, the price will be higher and the grower will get more for a maund of cane.

President.—If you were to couple a system of tariffs with a system of licensing of areas of a factory, it seems to me that if you licensed a certain area round one factory, even if the price of sugar was increased, that factory would not necessarily pay the growers any more, because there would be no one to compete in that area.

Mr. Venkatraman.—I quite see the point, but something will have to be done to prevent this.

Dr. Matthai.—There must be some kind of control.

Mr. Venkatraman.—Yes, otherwise the factory man will fleece the grower. That is not what we want. We are more on the side of the grower than on the side of anybody else.

Dr. Matthai.—Unless we are prepared to adopt some system of control as in Java or Famosa, we are not likely to succeed?

Mr. Venkatraman.—The more I think about the problem, the less I feel my ground clear, because unless we introduce compulsion a little amount of compulsion—I don't see how we can compete with a country like Java.

Dr. Matthai.—We feel with regard to the sugar industry that it is very different from any other enquiry we have had so far, in this respect that you have got to find the raw material within a specified distance of the factory. Raw cotton or any other raw material you can carry over a long distance, whereas a sugar factory is absolutely confined to a distance of ten miles if there is no railway communication. Unless there is some control secured, Tariff assistance may be futile by itself.

Mr. Venkatraman.—Some gentle paternal control is absolutely necessary. It is true that it is against all democratic ideas but I cannot see any other way out of it, if you are going to build up this industry. If you are going to give some tariff protection, you must think of some method by which the grower is assured of his profit.

Dr. Matthai.—We are here interested in considering the practical difficulties of the thing. Supposing for example a scheme like this was suggested for the United Provinces or for Bihar where practically all the white sugar now raised in this country is manufactured the cry would at once be raised that compulsion is being used for the benefit of the European manufacturing interests.

Mr. Venkatraman.—Yes, that is true. I quite see the point. In fact some time back I was not for licensing but the more I see of the canes being hauled over long distances unnecessarily (and deteriorating all the time) from one place to another passing sometimes two or three factories in between it strikes me that it is a ridiculous waste which we must avoid.

President.—Have you any information as to the position of the factories; we have not received any application for protection from factories.

Mr. Venkatraman.—That is a thing which I have not been able to understand.

President.—It seems that the factories have been doing well.

Mr. Venkatraman.—It may be that they are doing so well that they do not want any assistance. But it has always been puzzling me. It is clear that our factories are not happy. Go to the shareholders: they are not happy. Go to the growers—they are not happy. Then, there is something wrong.

President.—What about the managing agents?

Mr. Venkatraman.—I have not gone much to the managing agents, but I know that the two classes of people I have mentioned are not happy and it is the duty of this Board to see if it can make matters better for those two classes of people because we are ultimately interested in growers. I cannot think of a situation when we will lose the sugarcane just as we have lost the indigo. It will be serious; it will be a disaster. It is not merely the crop that I am thinking of. As I said before, if the Tariff Board travels in Northern India in winter I want you to see how happy the raiyat and his family and children are, chewing canes, singing and making themselves merry. The sugarcane adds to the total happiness of the people and we cannot afford to lose it. We cannot afford to be always materialistic and not only that, I want to mention another point, *i.e.*, the effect of the sugarcane crop on the subsequent crops. Sugarcane receives so much good cultivation, so much manuring that the wheat crop following it benefits by it. It is a valuable link in the chain and it has got its repercussions on the subsequent crops as well. We dare not lose that link.

President.—What is the general rotation of crop after sugarcane?

Mr. Venkatraman.—It is paddy in Madras. In Java also it is paddy, whereas in North India it is wheat.

President.—Sugarcane is put down once in three years.

Mr. Venkatraman.—Yes, here it is once in three years.

THE SUGAR TECHNOLOGISTS' ASSOCIATION, ALLAHABAD.

Oral Evidence of Mr. K. C. BANERJI, recorded at Cawnpore on Friday, the 31st October, 1930.

President.—Mr. Banerji, you are appearing on behalf of the Sugar Technologists' Association?

Mr. Banerji.—Yes.

President.—When was the Association formed?

Mr. Banerji.—Sometime in 1926.

President.—What is its constitution?

Mr. Banerji.—We have got 3 sorts of memberships, Fellows, Associates and Companion Members. Companion Members are factories and other institutions who are interested in sugar.

President.—How many fellows are there?

Mr. Banerji.—Fellows and Associates are according to their status as Technologists in the industry.

President.—How many fellows are there in your Association?

Mr. Banerji.—I have got a list here (handed in). The last one is 1928. There are some changes in the President and Members of the Council. In 1929 Mr. Noël Deerr was the President. We are going to have new elections sometime in February 1931.

President.—This representation which you forwarded to us was considered by this Association?

Mr. Banerji.—This was considered by several members of the Association, because I saw your notification in the papers rather late and could not circulate it wholesale. Still, people who count were consulted and we drafted out this representation.

President.—This representation is a representation on the part of some members of the Association?

Mr. Banerji.—Yes, some members.

Dr. Matthai.—Are all the Fellows of your Association technologists employed in sugar factories or are some of them consulting technologists?

Mr. Banerji.—Some of them are consulting technologists and the majority of them are employed somewhere.

Dr. Matthai.—Your membership extends over the whole of India?

Mr. Banerji.—In fact we have got members in many sugar countries of the world. You will find there a list of foreign members as well.

Dr. Matthai.—Are they corresponding members?

Mr. Banerji.—Yes, because we also work in conjunction with the sugar technologists—I mean the International Society of Sugarcane Technologists.

Dr. Matthai.—Personally have you experience of other countries besides India?

Mr. Banerji.—Yes, I have.

Dr. Matthai.—What countries have you visited?

Mr. Banerji.—Java, Philippines, Formosa, I visited recently when I went to attend the International Sugar Congress that was held at Java.

Dr. Matthai.—Where exactly did you get your training?

Mr. Banerji.—Long ago I was a student at Charlottenburg.

Dr. Matthai.—In Germany?

Mr. Banerji.—Yes. I am in this line for the past 24 years.

Dr. Matthai.—You have studied sugar technology?

Mr. Banerji.—In those days there was nothing as sugar technology but my subjects were fermentation and carbo-hydrates.

Dr. Matthai.—And later on you specialised in sugar technology?

Mr. Banerji.—This is the only work I have done in my life.

Dr. Matthai.—What exactly is your practical experience of sugar technology? Have you been connected with any factories in India?

Mr. Banerji.—For the past 24 years I am connected with many factories.

Dr. Matthai.—Could you mention any?

Mr. Banerji.—I first started with Begg Sutherland in 1906. They had three factories in those days. I was in all the three. Two of them were on Bihar side. After that I was in Partabpur, Japaha, New Savan and Ghughli, Tamkobi.

Dr. Matthai.—You are fairly familiar with most of the sugar factories. Have you been on the Western side? Have you visited Belapur?

Mr. Banerji.—No.

Dr. Matthai.—You know more or less the conditions of sugar factories in the main sugarcane belt?

Mr. Banerji.—Exactly.

President.—You are a consulting sugar technologist?

Mr. Banerji.—Yes, to some firms.

President.—To any particular firm?

Mr. Banerji.—Here in India they have not got a system of a permanent consulting man. But I generally advise Basti, Ghughli, sometimes I advise Jhusi, Buxar, etc., or any other stray factory that comes to me. These I generally do.

Dr. Matthai.—As a technologist I expect you are not directly concerned with the agricultural part of the industry.

Mr. Banerji.—Not directly, but as a technologist I have got to make arrangements for cane and as such I am indirectly concerned with the cane.

Dr. Matthai.—The arrangements for cane, in what sense?

Mr. Banerji.—For the crushing in the factory.

Dr. Matthai.—Take a question like the introduction of improved varieties. That would not come within your sphere?

Mr. Banerji.—It does, if not very directly. You cannot draw a line between the two.

Dr. Matthai.—I quite recognise you cannot draw a sharp line.

Mr. Banerji.—You cannot, because I am concerned with the cane and I have got to give them a certain yield.

Dr. Matthai.—Your results as a technologist would to some extent be determined by the yield of the cane, and by the kind of cane produced. To that extent you are concerned with the agricultural part?

Mr. Banerji.—Yes. In my line when I choose the kind of cane I have at the same time to look to the supply of that cane from the area which I control.

Dr. Matthai.—Whether you get a sufficient supply of cane?

Mr. Banerji.—Exactly.

President.—And at what period of the year. That is to say whether it is an early cane or late cane.

Mr. Banerji.—Both, because we have got to put through so many tons a day for a length of time say from November to end of April or beginning of May.

President.—120 working days.

Mr. Banerji.—I think it is more than that. When a factory crushes so many hundred tons per day, you have got to make arrangements for that cane within a certain area and within a certain time. So you are always interested in that question.

Dr. Matthai.—In the way in which factories are organised in India, would the department of the factory which would be charged with the responsibility of seeing that a continuous supply of cane is assured, be under a cane Manager or would it be under a technologist?

Mr. Banerji.—Not necessarily under a cane Manager. The cane Manager generally looks after the farm. Very few factories have their own farms. The cane Manager has got to work under the direction of the sugar technologist, because he is the man who can tell him as to how much he wants or when he doesn't want cane. But in some factories the arrangement is like this that the technologist sends out the chalan. The cane Manager gives the position of cane at 4 o'clock in the afternoon, stating the quantity already in the yard and the quantity expected at night then the technologist sends out a chalan that he should have so many wagons from such and such stations and so many carts. It is always done in consultation with the technologist. The cane Manager doesn't do anything himself, because he cannot do it.

Dr. Matthai.—Does the Technologist control also the chemical side of the work?

Mr. Banerji.—He does.

Dr. Matthai.—He has got necessarily to be a chemist?

Mr. Banerji.—Yes.

Dr. Matthai.—He combines that is to say the chemical part of the work with the engineering part.

Mr. Banerji.—No, with the manufacturing part.

Dr. Matthai.—The engineer would be a separate officer?

Mr. Banerji.—Yes.

President.—In your representation, Mr. Banerji, you deal with the costs of manufacture of sugar in different countries.

Mr. Banerji.—Yes.

President.—These costs I gather from the notes below are for various years.

Mr. Banerji.—Yes.

President.—Some of them are as old as 1924-25 and some of them more recent. The latest is for 1929.

Mr. Banerji.—Yes.

President.—On what are these costs based? Your own information or are they derived from somewhere?

Mr. Banerji.—In every case I have given you a reference as to where from I got these.

President.—For instance Java (a) is based on the annual report of two Estates in 1927?

Mr. Banerji.—Yes.

President.—Are these figures collated by you from the report of the two Estates?

Mr. Banerji.—When I went to Java I was rather keen on having their manufacturing costs and from these two factories I got these figures.

Dr. Matthai.—You have seen the report of the Sugar Committee of the League of Nations, have you?

Mr. Banerji.—Yes.

Dr. Matthai.—How do your costs compare with the costs given in that report? Your figures in some cases are different, I suppose

Mr. Banerji.—They are. I shall tell you how. I have prepared another short note on the subject. There are several factors. For instance, I shall first of all deal with cane. Now in Java and Hawaii, they plant their own cane, harvest their own cane, transport all their cane and also manufacture sugar. Their costs will vary with the tonnage of cane produced per hectare. So, you cannot have the same manufacturing costs every year. They are bound to vary. Now with the introduction of P. O. J. 2878 their tonnage has increased like anything. Then for bibits (nursery seeds)—they have done away with their hill nurseries now—their collection cost of seed has become cheaper and for the same irrigation, manuring and labour per hectare they are getting more cane. Naturally their manufacturing costs have come down like anything. Then, there is another thing. Hawaii pays a bonus if the price of sugar goes over a certain figure in New York, whereas Java pays a bonus only on the profit. So, the bonus question does not affect the Java manufacturing costs.

Dr. Matthai.—Java pays a bonus on the profit?

Mr. Banerji.—Yes, if it makes a profit.

Dr. Matthai.—Bonus to whom?

Mr. Banerji.—To their men.

Dr. Matthai.—They control their own land?

Mr. Banerji.—Yes. They pay bonus to their factory men, to the field overseers and to the operatives.

President.—You mean to their staff?

Mr. Banerji.—Yes.

Dr. Matthai.—But the bonus does not affect the cost of the sugarcane.

Mr. Banerji.—In the case of Java and Hawaii

Dr. Matthai.—We are immediately concerned with Java since Java is our chief competitor.

Mr. Banerji.—I am talking of the two countries Java and Hawaii which have got the same conditions. In the case of Java bonus does not affect the manufacturing cost, whereas in the case of Hawaii it does.

Dr. Matthai.—That we understand.

Mr. Banerji.—If I just explain, you will have an idea.

President.—We quite understand.

Dr. Matthai.—We are quite familiar with the position. The real point is: is it possible for you to give us any figures for Java costs which are later than the figures given here. That is to say, can you make an approximate estimate of the cost of sugar in Java to-day?

Mr. Banerji.—Not for 1929-30.

Dr. Matthai.—You cannot make an approximate estimate?

Mr. Banerji.—No, because they are very conservative people, and now since the introduction of P. O. J. 2878 I could not get any figures. At present 95 per cent. of their cane is P. O. J. 2878. So their costs must have gone down like anything.

Dr. Matthai.—Don't you have any published figures with regard to the yield of cane which they have been able to secure with P. O. J. 2878?

Mr. Banerji.—I have.

Dr. Matthai.—You know their yield three or four years ago?

Mr. Banerji.—Yes, I can give you that.

Dr. Matthai.—And probably you have also figures with regard to their progress in extraction during these years?

Mr. Banerji.—Yes.

Dr. Matthai.—Can't you, from these data, deduce approximately the cost of Java sugar now? It might not be quite accurate.

Mr. Banerji.—I think that is possible. I have got those figures with me. Unfortunately I have not brought them here.

Dr. Matthai.—That is of some practical importance to us.

Mr. Banerji.—Yes. As regards their production of P. O. J. 2878, the 1927 Year Book will give you some information. This paper (showed a page of the 1927 Year Book) will give you an idea as to how P. O. J. 2878 has been behaving.

Dr. Matthai.—This was written when?

Mr. Banerji.—In 1927.

Dr. Matthai.—That is too early for us.

Mr. Banerji.—I think I can give you those figures.

Dr. Matthai.—Can you send us a note later on?

Mr. Banerji.—If you just give me your question in a definite form, I shall.

Dr. Matthai.—The question is simply this. At present Java sugar is coming to the Calcutta market and being sold there at a price of Rs. 8-6-0 a maund including the duty. Is it possible for Java to send their sugar to Calcutta at a lower rate; that is to say, does their present cost of production enable them, if necessary, to lower the price of sugar in Calcutta below the present limit?

Mr. Banerji.—I shall send you a note.

Dr. Matthai.—If you could consider that point and give us your views, we should be grateful.

Mr. Banerji.—Yes. I shall do my best.

President.—This figure (Java (a)) is based on the annual report of the two Estates.

Mr. Banerji.—Yes.

President.—Are they good or bad estates?

Mr. Banerji.—They are average estates. I think I can give you an idea of these two Estates. One is Rondogunting having 8,000 acres under cultivation. Of course they don't have the same land every year.

President.—You mean 8,000 acres under cane?

Mr. Banerji.—Yes. No factory possesses its own land. They have all got to lease it every year and the other one is Tasikmado having 8,100 acres under cultivation.

President.—Would you consider these two estates as typical?

Mr. Banerji.—Yes.

President.—Then, as regards the cost of production in British India, you take that as 14 shillings 3 pence.

Mr. Banerji.—Yes.

President.—On what is that based?

Mr. Banerji.—These figures are also of three average factories.

President.—Which factories are these?

Mr. Banerji.—There is one thing about the Indian factories on which I would ask you to excuse me, because I have got the figures on condition that I don't divulge the names.

Dr. Matthai.—Do you personally consider them typical of Indian factories as a whole?

Mr. Banerji.—They may be considered as typical. There are some factories which are working better and there are others which are working much worse. On an average they may be considered as typical.

President.—Would you consider the Begg Sutherland group on the whole as typical?

Mr. Banerji.—Yes.

President.—Or would they be above the usual standard?

Mr. Banerji.—As regards percentage production their group will top the list, but as regards cost of production they are an average group.

President.—These three factories on which you based your costs are about the average too?

Mr. Banerji.—Yes.

President.—This cost of 14s. 3d. what does that include? Does that include depreciation for instance?

Mr. Banerji.—It does not include the managing agents' charges.

Dr. Matthai.—In the introductory note you have said that the cost of production is f.o.b. including repairs, renewals, taxes, and interest but excluding depreciation, and interest on capital. Are you quite sure that it does exclude depreciation?

Mr. Banerji.—Yes.

Dr. Matthai.—That is about Rs. 9½ a cwt. excluding depreciation and profit?

Mr. Banerji.—Yes.

President.—When you speak of interest on capital, I suppose you mean interest on working capital?

Mr. Banerji.—Not working capital.

President.—Then the interest on working capital is included?

Mr. Banerji.—Yes.

President.—The only things that are excluded are depreciation and profit?

Mr. Banerji.—Yes.

Dr. Matthai.—To what year does this figure relate?

Mr. Banerji.—This represents the average, as I said, of three factories of two or three years.

Dr. Matthai.—About 1927?

Mr. Banerji.—Yes, 1926, 1927 and 1928.

Dr. Matthai.—Without disclosing the names of factories with which you are in touch, could you tell us approximately what is likely to be the corresponding cost now?

Mr. Banerji.—It all depends on the season. Last season was a better season. So, it must have gone down by two or three annas.

Dr. Matthai.—By better season you mean they had a larger supply of cane?

Mr. Banerji.—Yes, and 'if there is no break down or other cause of closing down the crushing for a few days.

Dr. Matthai.—You are not now directly in touch with the costs of any Indian factories. I don't want you to disclose any confidential information. All that I am asking is: is it possible for you to give us any figure which might be regarded as an accurate estimate of typical Indian costs?

Mr. Banerji.—I cannot promise you, but I shall try.

Dr. Matthai.—I suppose this figure of 14s. 3d. is likely to be higher than the present cost?

Mr. Banerji.—Very little: by three or four annas at the most.

Dr. Matthai.—Supposing we were trying to estimate a fair price for the Indian manufacturer, you have to add to this figure of 14s. 3d. or Rs. 9½ something for depreciation and interest on capital, i.e., profit.

Mr. Banerji.—How much are you taking a shilling for?

Dr. Matthai.—1 shilling 6 pence per rupee.

Mr. Banerji.—I have based it at 13 annas and something.

Dr. Matthai.—You have based your calculations on Rs. 13-10-0 and I have taken Rs. 13-5-4. What would you consider a proper allowance for depreciation and profit?

Mr. Banerji.—Depreciation on machinery is 2½ per cent.

President.—On machinery?

Mr. Banerji.—Yes, although some factories show 5 per cent.

Dr. Matthai.—What do you estimate the capital expenditure at?

Mr. Banerji.—Rs. 12 lakhs for an average factory.

Dr. Matthai.—With an output of how much—in terms of sugar?

Mr. Banerji.—That would be 450 tons.

Dr. Matthai.—450 tons of cane a day?

Mr. Banerji.—Yes.

Dr. Matthai.—We might take it at 45 tons of sugar.

Mr. Banerji.—We don't get 10 per cent.

Dr. Matthai.—Take it at 9 per cent?

Mr. Banerji.—I can give you figures up to 1929.

Dr. Matthai.—Say about 40 tons a day?

Mr. Banerji.—Yes, nearly. 8·54 per cent. was the average for 1929.

Dr. Matthai.—You mean by average what?

Mr. Banerji.—Sugar on the weight of cane.

Dr. Matthai.—That is taking practically all the factories into account?

Mr. Banerji.—Yes. In 1928, it was 8·58 per cent.

President.—Is that the arithmetical average of all the factories?

Mr. Banerji.—Yes. In 1927, it was 8·70 per cent. In 1928, 18 out of 19 factories sent in their report. In 1929, I believe 16 out of 18 factories sent in their report.

Dr. Matthai.—For purposes of your calculation you would take an average of 8·5?

Mr. Banerji.—Yes.

Dr. Matthai.—On that basis, a factory that crushes 450 tons of cane a day might make in a year about 120,000 maunds.

Mr. Banerji.—Nearly.

Dr. Matthai.—So, you can take the capitalisation at about Rs. 10 per maund of sugar.

Mr. Banerji.—Yes.

Dr. Matthai.—That would be approximately correct?

Mr. Banerji.—Or we can take it on cane.

Dr. Matthai.—In order to get the correct selling price, it is better to take it on the white sugar.

Mr. Banerji.—But your sugar would be fluctuating.

Dr. Matthai.—You mean the output of sugar would be fluctuating?

Mr. Banerji.—Yes.

Dr. Matthai.—You will have to take some kind of figure for calculation.

Mr. Banerji.—Why not take the raw material?

Dr. Matthai.—My question is this. I want you to give me a figure which would be approximately correct for depreciation and profit which has to be added on to the cost of production of a cwt. of white sugar. You have to find a figure per cwt. of white sugar. If you take Rs. 10 per maund or about Rs. 13 per cwt., what percentage on that would you allow for depreciation?

Mr. Banerji.—For machinery you mean?

Dr. Matthai.—Machinery, buildings and everything.

Mr. Banerji.—Personally I would not allow more than 2½ per cent.

Dr. Matthai.—On machinery?

Mr. Banerji.—Yes.

President.—On the ground I suppose that the machinery is overhauled every year?

Mr. Banerji.—Yes, although that is not the practice. They show more for two reasons. One may be for the sake of the Income-tax Department or something like that. Personally I would not go beyond 2½ per cent.

Dr. Matthai.—Let us take 6 annas for depreciation per cwt. What do you think would be a fair rate of profit to allow—a rate of profit which would be fair to the manufacturer and at the same time would be a sufficient inducement for a reasonable expansion of the industry?

Mr. Banerji.—As it is, up till last year, every sugar factory made a profit even at the present rate

Dr. Matthai.—We are producing at present in large scale factories about 60,000 tons of white sugar.

Mr. Banerji.—68,000 tons.

Dr. Matthai.—We are importing about a million tons.

Mr. Banerji.—Yes.

Dr. Matthai.—That is a long way to travel. The investor has to be given a sufficient inducement to invest his capital in order to cover this big gap between 68,000 tons and a million tons.

Mr. Banerji.—Yes.

Dr. Matthai.—What in your opinion—you are familiar with the conditions of the industry—would be a sufficient return to induce the capitalist to put his money into it?

Mr. Banerji.—If they get 15 per cent. or something like that, they ought to be satisfied.

President.—Is it a net return on their money or including the amount appropriated to the reserve?

Mr. Banerji.—That is the dividend paid to the shareholders. Even then they can keep something back for reserve.

President.—Do you think that 15 per cent. is quite reasonable?

Mr. Banerji.—Yes. That is what they are getting now.

President.—Apart from that you say this does not include managing agents' charges.

Mr. Banerji.—That is very little. In some of the factories, for instance in New Sivan, they had only Rs. 1,000 a month or Rs. 12,000 a year.

President.—On an output of 120,000 maunds that would be 12 of a rupee or say an anna and a half.

Dr. Matthai.—Roughly it comes to Rs. 12 so that on your figures a fair price for the Indian manufacturer would be Rs. 12 a cwt.?

Mr. Banerji.—Yes, at present.

Dr. Matthai.—The problem before us is to fix the measure of protection required for the Indian industry. May we take for that purpose Rs. 12 as a reasonable estimate of the fair price for the Indian manufacturer?

Mr. Banerji.—Yes, we can.

President.—In your cost of 14s. 3d. what rate for cane do you presuppose these three factories paid on an average?

Mr. Banerji.—The average cane price is 7 annas 6 pies or at the most 8 annas.

President.—This figure of 14s. 3d. includes cost of cane at, say, 7 to 8 annas a maund?

Mr. Banerji.—Rs. 0-7-6 to 8 annas delivered at the factory.

Dr. Matthai.—You consider that a price of 8 annas would be sufficient to induce the grower to supply cane in sufficient quantities to factories?

Mr. Banerji.—Yes.

Dr. Matthai.—It is unnecessary to go beyond that?

Mr. Banerji.—It is quite unnecessary. I believe they will be satisfied with something less than 8 annas if the whole thing is properly managed.

Dr. Matthai.—How much lower than 8 annas?

Mr. Banerji.—We started at 6 annas per maund delivered at the station. There was no objection.

Dr. Matthai.—What about haulage?

Mr. Banerji.—That does not come to more than on the average 2½ to 3 pice so the factory gets at 7 annas. If these factories did not start raising rates amongst themselves I think they could easily get cane from the beginning of the season to the end at 6 to 7 annas.

Dr. Matthai.—That is a point which we will come to later. Taking Rs. 12 as the fair price due to the Indian manufacturer what would you advise us to take as the import price of Java sugar? May we take the present price?

Mr. Banerji.—Yes.

Dr. Matthai.—That is to say the present price may be taken as probably the minimum price?

Mr. Banerji.—The probable minimum price of Java I don't think will go much below this.

Dr. Matthai.—What is your reason for thinking that?

Mr. Banerji.—When I was in Java last year there was already this question before them of the low price. Java is also affected by this low price and they do not want to go any lower still.

Dr. Matthai.—There has been considerable reduction since you were in Java.

Mr. Banerji.—I know, but that is what I found there last year. They are faced with over-production of cane; their factories are doing to their utmost capacity. As it is they cannot crush any more whereas they have got with P. O. J. 2878 more cane on the field.

Dr. Matthai.—So they must find an outlet for it and they have got to lower the price still more?

Mr. Banerji.—I think they have come to their lowest price. Now what they are going to do is to dump their *gur* into India and kill the *gur* industry here.

Dr. Matthai.—We will take that up later. In your opinion the present price may be regarded as the minimum?

Mr. Banerji.—Yes, the average minimum.

Dr. Matthai.—The present price in the Calcutta market is Rs. 8-6-0 out of that Rs. 4-6-0 is the duty. That gives you Rs. 4 c.i.f. and the fair selling price you have suggested for the Indian manufacturer is Rs. 12 a cwt.?

Mr. Banerji.—Yes.

Dr. Matthai.—Rs. 5-5-0 is the c.i.f. price per cwt.; that would mean a duty of Rs. 6-11-0 as the duty which the industry would require for protection?

Mr. Banerji.—Then there is another thing: why put a duty on sugar, why not put it on molasses?

Dr. Matthai.—We will take that up later. About Rs. 6-12-0 let us say is the duty required; that is to say the Indian industry should get additional assistance to the extent of 12 annas?

Mr. Banerji.—Yes.

President.—That is on the assumption that the Java price cannot fall any lower; if it falls lower we shall have to add to that assistance?

Mr. Banerji.—Yes.

President—Have you any figures regarding the cost of beet?

Mr. Banerji—I don't think I can give you anything in detail as regards beet. I simply got these things from the reports.

President.—The price of United States beet you give as 18s. 8d.; that would give the general idea of the cost of beet?

Mr. Banerji.—Yes.

President.—I see you take 120,000 tons molasses as about the output of molasses in India. I don't quite understand how you get that because I understood that the output of molasses was 40 per cent. of the output of white sugar. that would mean that the output of white sugar was something like 300,000 tons whereas it is something like 68,000 tons.

Mr. Banerji.—Along with that we have got to consider the molasses they make in refineries which is 50 per cent. of their output.

Dr. Matthai.—You mean *gur* refineries?

Mr. Banerji.—Yes. I am taking the total production of molasses in India, not what they make in modern factories.

Dr. Matthai.—Could you give us an analysis of the various sources from which molasses is obtained in India? If you take large scale factories what would you take as the percentage of molasses?

Mr. Banerji.—I shall give you the exact percentage for the last three years. 3.76 per cent. weight of molasses per cent. cane in 1929 for modern factories. In 1928 it was 3.74 per cent.

President.—What is the amount of cane crushed?

Mr. Banerji.—17,199,533 maunds; that is in 18 factories.

President.—That would be about 7 lakhs of tons?

Mr. Banerji.—We can take the three years average of the weight and calculate on that. Final molasses in 1929 was 3.76 per cent. and 3.74 per cent. in 1928. We can take 3.75 as the average.

Dr. Matthai.—That is approximately 23,000 tons from white sugar, and from *gur*?

Mr. Banerji.—53,000 tons of sugar in *gur* refining and very nearly the same quantity, say, 50,000 tons of molasses.

Dr. Matthai.—What about the khandsaris?

Mr. Banerji.—You get more molasses in khandsaris.

Dr. Matthai.—You don't include Khandsari in this *gur* refining?

Mr. Banerji.—No. The rest of that molasses has been compiled from several Government figures. I had to depend mainly on Mr. Wynne Sayer for that and on other Government departments.

Dr. Matthai.—What is the amount you take of white sugar turned out by khandsaris?

Mr. Banerji.—50,000 tons.

Dr. Matthai.—What you are doing is to take practically 50 per cent. of that for molasses. That gives you approximately your 120,000 tons.

Mr. Banerji.—Yes.

Dr. Matthai.—Have the imports ever been 120,000 tons? I find in 1929-30 the figure is considerably lower than that.

Mr. Banerji.—I have taken that from Government figures.

Dr. Matthai.—I can't find within the last five years any year in which the import of molasses reached as high as 120,000 tons. For our purposes we might take the latest figure, 70,000 tons?

Mr. Banerji.—Take it as 70,000 tons or take it as a little bit more.

Dr. Matthai.—Why do you want to take it a little higher? Is it because we produce more sugar in this country?

Mr. Banerji.—Not necessarily. It all depends on the price.

Dr. Matthai.—Assuming that the sugar industry is going to be protected?

Mr. Banerji.—Java is selling sugar very cheap for the past two years but they have raised the price of molasses which is of secondary consideration. You are getting less molasses imported here now but if the price of sugar goes up they might lower the price of molasses and you may get 97,000 tons or something like that.

Dr. Matthai.—That is to say if the sugar market revives and the price of sugar goes up, the price of molasses may come down?

Mr. Banerji.—Yes, naturally.

Dr. Matthai.—But you have got to find an outlet in this country for the additional quantity of molasses that would be made in Indian sugar factories if sugar production increases, so do you think there would be sufficient market in this country for an addition to the Indian production as well as an addition to the imports from Java?

Mr. Banerji.—Personally I would stop all Java molasses in this country and have an outlet for our own molasses if we can sell that.

Dr. Matthai.—That is another question: I am trying to find out what is likely to be the consumption. For the present let us take somewhere about 100,000 tons as the imports: that gives you 220,000 tons as the consumption of the country. What precisely is the proposal that you are making about molasses?

Mr. Banerji.—My proposal is this. If molasses sells in India at a higher rate it means so much lower manufacturing cost, so make it impossible for Java to send even an ounce of molasses to India. Put a very heavy duty on molasses instead of 25 per cent. *ad valorem* which is nothing.

Dr. Matthai.—When do you expect Indian factories by their production to replace the present import of 100,000 tons of molasses?

Mr. Banerji.—Even if we don't get that 100,000 tons of molasses we don't suffer much.

President.—Have you consulted anyone who is acquainted with the lac industry?

Mr. Banerji.—No, I have not.

President.—They use methylated spirit. Now if the import of molasses is to be prohibited presumably the price of Indian molasses will go up; if that goes up, the people who manufacture methylated spirit will suffer.

Mr. Banerji.—Most of our molasses is sold for mixing with tobacco for the bazar people. Don't sell it to them, sell it to the manufacturer of methylated spirit.

President.—Take Messrs. Carew and Company; their costs will go up and they will naturally claim that a duty should be put on imported methylated spirit and then the price of methylated spirit will go up. In that case what will the lac people do?

Mr. Banerji.—Why should the costs go up? Now, Java sends molasses all the way from there. This year of course molasses is selling at a very good price. Rs. 3-4 and molasses will never go beyond Rs. 4. If they can make at Rs. 3-4 they can easily make at Rs. 4.

President.—They can't make it at Rs. 3-4; that is why they have applied for protection—either to increase the duty on methylated spirit or reduce the duty on molasses. On the other hand the lac manufacturers say "you can't increase the duty on methylated spirit, if you do so we won't be able to sell our lac".

Mr. Banerji.—If you reduce the duty on molasses you kill a bigger industry here.

President.—Why should you?

Mr. Banerji.—This sugar industry if it is properly carried on in India will not only supply the whole of India, but supply the whole of the East.

President.—Why should you be killing the Indian industry? The case as it appears to me is this: you agree that protection is required for the Indian industry. There are two ways of protecting it amongst others. One is to put a duty on imported sugar and the other is to protect it partly by a duty on imported sugar and partly by a higher duty on molasses. If you don't adopt the latter course, you increase the duty on imported sugar. What is wanted is that the industry should not be killed. It is merely a question of the selection of the method of protection.

Mr. Banerji.—Exactly, but then there is another thing in this paper. I don't recommend a duty without considering this point, that the condition precedent should be that the sugar industry would improve itself so much within so many years time that there would be no need of this protection. That is No. 1 and No. 2 is this: that out of the revenue realised from this duty a part say Rs. 2 per maund should go back to the modern industry, provided the modern industry gives this undertaking.

President.—Taking the first part of your proposition that no protection should be given unless the industry gives an undertaking to reduce its price.

Mr. Banerji.—I don't mean exactly undertaking, at least some sort of assurance.

President.—What is the sanction for that? Government for instance goes before the Assembly and recommends the imposition of the duty on sugar and the Assembly said "This should be conditional on an undertaking from the Sugar industry to reduce its costs". What assurance would we have that this undertaking would be fulfilled?

Mr. Banerji.—Only their word. If they gave the word, they ought to keep it.

President.—In other words what you wish us to do would be to make our recommendations and attach to those recommendations a strong rider that the Indian industry shall make every effort to improve?

Mr. Banerji.—Exactly. For that at least they should be unanimous in putting forward some plan.

President.—How does that affect the duty on molasses?

Mr. Banerji.—By molasses duty, I mean it would make it impossible for the foreign molasses to come here.

President.—At the expense of other industries?

Mr. Banerji.—No. I didn't consider that point. I simply confined myself to sugar.

Dr. Matthai.—As far as sugar is concerned, supposing as the result of any duty that we may recommend, the price of sugar in Calcutta reaches a figure somewhere about Rs. 10 a maund, would you consider that in any sense a burden on the country?

Mr. Banerji.—I should not think so.

Dr. Matthai.—Because two years ago that was the price and for several years the price stood at much higher than Rs. 10.

Mr. Banerji.—Before the war it came down to Rs. 7-12 in one year.

Dr. Matthai.—Ever since the war the price for cane sugar ranged from Rs. 10-8 to as much as Rs. 27 a maund.

Mr. Banerji.—In one year it went up to nearly Rs. 40. That was in 1922-23.

Dr. Matthai.—It is only this year and last year it has come to below Rs. 10.

President.—Java whites—

	Per cwt. Rs. A.
1911	10 0
1912	10 4
1914	11 8

These are figures when the duty was 5 per cent.

C and F Value—

1914	9 6
1915	9 8

That is to say for 4 years before the war the lowest price touched was As. 8 below Rs. 10. In 1916 the price was Rs. 14-12.

Dr. Matthai.—Till 1928 it was about Rs. 10 per maund.

Mr. Banerji.—It is a fair price.

Dr. Matthai.—Supposing the proposal that we make has the effect of raising the price of sugar to a level not higher than Rs. 10 a maund. You would not consider that an excessive burden placed on the consumer?

Mr. Banerji.—Not at all. People may grumble, but they will always buy sugar even if the price is as high a figure as Rs. 25. India spends in value every year, say, 1,500 lakhs for sugar.

Dr. Matthai.—I look at it this way. The average consumption of sugar per head of the population is, I suppose, about 25 lbs.

Mr. Banerji.—Yes, something like that.

Dr. Matthai.—If you increase the price from the present figure of Rs. 8-6 in the Calcutta market to Rs. 10, the excess amount paid by an individual consumer in this country would not be more than As. 8 a year

Mr. Banerji.—Rs. 10 is a good price. Nobody would grumble.

Dr. Matthai.—Quite a reasonable price?

Mr. Banerji.—Yes.

Dr. Matthai.—Supposing we are able to give all the protection required for the Indian industry by a duty which doesn't raise the price to the consumer beyond Rs. 10, then is it necessary to go into the question of molasses, because they would have got in that form all the assistance they needed? As the President suggested raising the question of molasses might involve questions affecting other industries.

Mr. Banerji.—It would be simply stopping one's fever by administering quinine. It may come out again who knows.

Dr. Matthai.—Can you think of a better remedy for malaria than quinine?

Mr. Banerji.—I have myself never taken quinine.

President.—You never had fever perhaps?

Mr. Banerji.—Not in the past 20 years. What we want is this: whether the industry would improve itself so much as to be independent of protection.

Dr. Matthai.—Your idea is this, that the assistance given to the Indian Sugar industry must be such that it would be possible for Government to withdraw the assistance from any particular factory which refuses to undertake improvements?

Mr. Banerji.—Exactly so.

Dr. Matthai.—And you think it would be impossible to do that if the assistance were given by means of a duty?

Mr. Banerji.—That is right.

Dr. Matthai.—I don't quite understand why you single out molasses for a duty.

Mr. Banerji.—I have not singled out molasses. I have at the same time suggested that *gur* should also have just the same duty as the duty on sugar over 23 Dutch Standard.

President.—The same duty on *gur*?

Mr. Banerji.—Yes.

President.—It is, I suppose, because you want the Government to obtain some control over these factories, to have some power of forcing them to combine, that you recommend a bounty instead of a duty. Is that your idea?

Mr. Banerji.—That is my idea.

President.—What arrangements would you make for paying the bounty?

Mr. Banerji.—It would be on the tonnage of sugar produced by every factory.

President.—That I suppose would mean the appointment of a Government Officer for each factory?

Mr. Banerji.—No. One man can do for the whole industry.

President.—How? If you give a bounty it will be subject to audit checks.

Mr. Banerji.—As to how much cane they have crushed and what sugar they have produced? They have already got two officers and they can easily do this job.

President.—Who are they?

Mr. Banerji.—The Government Sugarcane Technologist and the Secretary of the Sugar Bureau. They have got the staff, office and everything.

President.—They would have to make some check at the factory.

Mr. Banerji.—Exactly.

President.—It would be very difficult in the cane crushing season for the production to be checked unless there is an Officer in each factory.

Mr. Banerji.—I don't think that is necessary. No factory would give a false return that it produced so much sugar.

President.—The Audit Department is suspicious. They won't accept as a rule declarations from factories.

Mr. Banerji.—What may happen is they may give you a higher figure of production in order to get more money out of Government.

Dr. Matthai.—Yes.

Mr. Banerji.—This can be very easily checked by their sale register and by the railway register at the station as to how much sugar they have sent out. They don't send out any sugar by cart.

Dr. Matthai.—You would suggest that the bounty should be assessed on the railway receipts?

Mr. Banerji.—You can have that.

Dr. Matthai.—What about the sugar produced by the khandsari?

Mr. Banerji.—Khandsari, I don't make much recommendation, because he cannot stand in the long run in this competition.

Dr. Matthai.—Under your bounty system no assistance would be given to the khandsari?

Mr. Banerji.—No.

Dr. Matthai.—To the *gur* refinery?

Mr. Banerji.—Neither the *gur* refinery. If you don't make *gur*, you can't have *gur* refineries.

Dr. Matthai.—If you confine your bounty to the large sugar factories and if you leave out both the *gur* refinery and the khandsari, then I suppose the khandsari will almost immediately disappear.

Mr. Banerji.—If you don't give all these helps to your modern factories, you will find that in another ten years' time all the *gur* and khandsari will

disappear. It is a child's play in the hands of Java to kill this industry in another ten years time for which they are making very very elaborate arrangements.

President.—You think that the price we have taken for Java sugar, c.i.f. Calcutta is a bit too high.

Mr. Banerji.—Why?

President.—You said that Java is making even at the present duty of Rs. 6 elaborate arrangements to kill the Indian industry.

Mr. Banerji.—Of gur and not sugar.

President.—My colleague was referring to the manufacture of sugar by khandsari.

Mr. Banerji.—It comes to the same thing. Khandsari sugar cannot stand against this mill made sugar. It has got a local competitor. That is my point, because in khandsari there is this economic loss that they are turning most of their sucrose into glucose. They don't get that return which a big factory will get. They don't get the extraction which a big factory will have. Therefore the factory will always sell cheaper. The khandsari production is going down every year.

Dr. Matthai.—That apparently is not a proposition which Mr. Clarke, the Director of Agriculture would accept. He is taking the line that there has been no reduction at all in the production of khandsari sugar and there is a great future for khandsari sugar in Rohilkhand.

Mr. Banerji.—With all respect to him, I don't agree.

Dr. Matthai.—He will probably go further and say that to let the khandsari disappear would be to deprive the cane cultivator in Rohilkhand of an important outlet for his cane.

Mr. Banerji.—They will start big factories. If you give Rs. 2 rebate that is more than a sufficient inducement for any capitalist to come and start a factory. One factory might replace at least 20 to 30 khandsaris.

President.—Communications are said to be not sufficiently good for the establishment of central factories

Mr. Banerji.—That can easily be overcome in these days of motor lorries and buses which are running almost everywhere.

President.—They must have roads to run on.

Mr. Banerji.—I don't think it is such a God forsaken place.

President.—We have never been there, but Mr. Clarke says so.

Mr. Banerji.—I have been in many parts of India. Somehow or other you will find a road fit for motor lorries especially in Rohilkhand, Pilibhit and Meerut. In all these districts there are roads.

Dr. Matthai.—At present large scale factories produce 68,000 tons and your proposal is that a bounty should be given on the basis of every maund of sugar produced?

Mr. Banerji.—Exactly.

President.—What is the actual proposal? A portion of this revenue should be made over as a bounty. What sort of estimate would you make?

Mr. Banerji.—Rs. 2 a maund. That would come to something like Rs. 25 lakhs.

Dr. Matthai.—If your bounty is going to be effective, the local production will increase?

Mr. Banerji.—Yes.

Dr. Matthai.—At present our total consumption is about one million tons of white sugar.

Mr. Banerji.—Yes.

Dr. Matthai.—The Indian industry under the stimulus of protection may increase its output to a figure which would be approximately equal to the present consumption and you will have to find money for the whole of the

output. That is to say the burden you are going to place upon Government is a burden which will increase progressively.

Mr. Banerji—That is neither my recommendation nor my idea. As soon as you increase your production, every factory increases by 50 per cent. and every factory gets better cane and all that. Rateably its cost of production comes down and the Government will be saved the bounty. They won't have to pay this bounty in a few years time.

President.—How long would you make this bounty applicable?

Mr. Banerji.—The longest period would be 10 years, but within 5 years time they ought to manufacture their sugar so cheap as not to require this bounty at all.

President.—So take 4 years time. What sort of output would they reach then?

Mr. Banerji.—Every factory should increase its production by 50 per cent. by that time.

President.—That would make it 90,000.

Mr. Banerji.—Yes.

President.—That would mean Rs. 48 lakhs a year.

Mr. Banerji.—If they came to 90,000, rateably their overhead expense goes down.

Dr. Matthai.—By how much can you really reduce by increasing the output? Roughly $\frac{1}{3}$ of your cost is sugarcane cost, is not that so?

Mr. Banerji.—Yes at the present moment.

Dr. Matthai.—Taking countries producing sugar throughout the world a figure of about 60 to 70 per cent. of the total cost represents the sugarcane cost. Supposing a factory increased its output, the extent to which it can reduce its cost is limited to the cost above material.

Mr. Banerji.—No.

Dr. Matthai.—I mean the sugarcane cost would depend almost entirely on the yield that you get from your field.

Mr. Banerji.—What I mean is this, that if you increase your production, it means better machinery—a longer train of rollers. A longer train of rollers means that if you were using 12 maunds of cane or 11 maunds of cane per maund of sugar you would use only 8 or 9 maunds of cane for one maund of sugar.

President.—I don't follow how you mean to assess this bounty. Is it to be so much per maund of output?

Mr. Banerji.—Yes, for only a certain number of years—say 3 or 4 years.

President.—If the output is increased you have to pay so much more?

Mr. Banerji.—After three years you stop it.

President.—The idea is that after three years all the factories would be able to increase their output by 50 per cent.

Mr. Banerji.—If not 50 per cent., at least 40 per cent.

President.—Where are they going to get their cane from?

Mr. Banerji.—I shall tell you. There is all this squabble about cane. If there is proper management, all these 19 factories in the white sugar tract in India should get enough cane for their needs.

President.—That I understand. I suppose you refer to the central agronomic organisation?

Mr. Banerji.—Yes.

President.—On the assumption that Government is paying a bounty to these factories, it would be possible for Government to say "unless you come into this organisation, we shall not pay you a bounty"?

Mr. Banerji.—Yes.

President.—So that for the first three years this organisation might work. Afterwards, some of the factories might say "we want to buy our canes independently".

Mr. Banerji.—It is their look out.

President.—If they did that, then the whole of your organisation would break down. Supposing owing to the sanction of this bounty Government were able to force all the factories to take action on these lines, then at the end of three years when your bounty ceases it would be quite possible that your agronomic organisation would also cease.

Mr. Banerji.—I don't think so.

President.—Why not?

Mr. Banerji.—Because in three years time all the factories will realise what benefit they get out of this and therefore they will never get out of it.

President.—We have been told by Mr. Lownie yesterday that the Sugar Producers Association almost arranged something on those lines a couple of years ago for the purchase and distribution of cane but the whole scheme was upset by one factory standing out. They said that it would cost a certain amount of money and that they could get their cane better without this organisation.

Mr. Banerji.—If you asked that one factory, probably you would hear a different tale.

Dr. Matthai.—What kind of tale might we hear?

Mr. Banerji.—I was present at the meeting when this question was considered. This was not the suggestion put before it. Of course this suggestion had been before the factories in one form or other for the past several years. But somehow or other there was some difficulty. The other suggestion was quite a different thing—I mean the one which Mr. Lownie had been referring to. In that case, although the objection came from one particular factory, a group of factories were chary about it. They thought that if they agreed to this particular arrangement, the whole management would go to Begg Sutherland's and that they might be left in the lurch. There was this distrust, but it the suggestion which I have outlined is allowed there would not be any room for suspicion or distrust. I had discussed this question with several factory owners. Now the position is this. European and Indian concerns are fifty-fifty. The Indian concerns naturally want that there should be Indian management so that they might get their full supplies, whereas the European concerns want that there should be European management so that their interests might be safe. My suggestion is that on the Directorate there should be three persons from the factory owners and three from the Technologists, with one Government representative, thus altogether making seven. Of the three factory owners, two would be Europeans and one Indian and of the three technologists two would be Indians and one European. Thus you will have three Europeans and three Indians by rotation (amongst factory owners and technologists) as Directors. In that case, I think everybody's interests would be looked after equally well.

President.—That might be so. But what I feel is this. So long as your Agronomic Central Organisation had a big stick in the shape of a Government behind it with power to withdraw the bounty if any factory did not agree to join, you would be all right, but the moment that bounty is stopped, then every one of the existing factories would take their own line. Supposing somebody comes along and starts a very large factory. The prevailing rate according to your Central Agronomic organisation is 6 annas. He says "I will get all the cane I want and turn out double as much as any factory. So, I shall offer 7 annas for the cane".

Mr. Banerji.—He cannot do that. He would be competing against 2 crores of maunds of cane which he can never do.

President.—Why not?

Mr. Banerji.—He cannot have a big factory like that.

Dr. Matthai.—That 2 crores of maunds of cane come from different parts of the country.

Mr. Banerji.—Not from different parts of the country but from a limited area of the white sugar tract itself. He cannot go beyond 100 miles.

Dr. Matthai.—It is a fairly big area. Supposing this new concern is started in a particular district where there is a fairly large supply of cane now, as for instance Gorakhpur?

President.—Supposing in Gorakhpur a new man comes in and says "It is true I cannot get all the sugarcane I require for my factory. But I must turn out 8,000 tons of sugar a year. I cannot get cane for anything like that amount if I join the organisation, but if I start independently and offer 7 annas as against 6 annas offered by the Association, I shall get all the cane I want." He comes in and offers 7 annas and your organisation also has to offer 7 annas.

Mr. Banerji.—No.

President.—What would your organisation do?

Mr. Banerji.—Name a particular place where he may start and I shall tell you the difficulty he will have in the way. Supposing he starts in Gorakhpur, he will have to compete against 6 or 7 factories which he cannot do.

President.—Why not?

Mr. Banerji.—How can he? He cannot have as large an output as that of the 6 or 7 factories put together?

President.—It does not matter. It is the question of cane that we are now on.

Mr. Banerji.—It would be a case of one individual whose requirements would be about one seventh of the others competing against a body which commands the whole market.

Dr. Matthai.—If he offers a high enough rate to get more than his due share?

Mr. Banerji.—I don't think that he will get it for the very simple reason that the cultivators know that the other party has helped them so much in the past and enabled them to increase their production and that they are the people who purchase cane from the cultivators year in and year out.

President.—That is just the point which has been put to us. We were told that there were factories which established themselves in certain areas and which helped cultivators and were getting regular supplies of cane and after they had been established, one or two new factories came along and proceeded to offer a higher price and obtain the cane from the cultivators, who were supplying previously the old factories. The same position would arise again.

Mr. Banerji.—In that case one factory is competing against another and here the new comer will compete against odds.

President.—I don't follow.

Dr. Matthai.—Supposing you have an area where three or four factories are working and you get a new man starting a factory there and he offers a higher rate or more attractive rates for the growers, you are not suggesting that considerations of gratitude for the past are likely to keep the growers from selling their cane to the new comer?

Mr. Banerji.—I am not talking of gratitude at all.

President.—Why should the growers continue to sell to the old factories?

Mr. Banerji.—Because they represent more factories. They command the whole show and the cultivators cannot get out of those people.

President.—Why not?

Mr. Banerji.—Not a bit of it. This particular individual cannot buy up all the supplies of 7 or 8 factories. If he is to attempt that, then he will have to purchase from so many stations.

President.—He does not want to purchase the whole lot.

Mr. Banerji.—He can be crushed out in no time. These people will be able to pay 5 annas more than the new comer. This higher price of a few stations will be distributed over the total cane, thus the rise in price would not be even a pie whereas in the case of a single factory his price is increased by 70 per cent.

President.—They will have to pay.

Mr. Banerji.—Only for a short time.

President.—Why can't they do that now when a new comer comes?

Mr. Banerji.—They cannot do it at present because there is no organisation. When there are five of them competing against one another, who will do it? In the other case, the new man will be competing with one single individual organisation on behalf of all these concerns. The same thing although in another form is done in Formosa. A similar thing is also done in Java. There is only one organisation which runs 183 factories.

President.—It is rather a different system.

Mr. Banerji.—Leaving aside the land tenure

Dr. Matthai.—It is a very important point.

Mr. Banerji.—Yes, very important both for the Government and for the factories there. The factories there are handicapped like anything because of the land tenure business.

President.—In Java?

Mr. Banerji.—Yes.

President.—I thought that in Java they leased the land and cultivated sugarcane.

Mr. Banerji.—Who?

President.—The factories.

Mr. Banerji.—They don't own the land.

President.—No They lease the land.

Mr. Banerji.—Only for two years. As soon as a crop is cut—it may be from 11 months to 16 or 17 months—the land automatically goes back to the cultivator. Now these Dutch people have to spend on irrigation, manuring and everything. The cultivator reaps the benefit of that. He also gets the rent for 2 or 2½ years whereas he actually rents the land for 1 to 1½ years. The cultivator reaps the benefit of irrigation and all that. When this land is under rice, the cultivator uses their irrigation water.

President.—The factory man gets it back again when the lease is renewed.

Mr. Banerji.—Not the same land. It must be some other land.

President.—After allowance is made for rotation?

Mr. Banerji.—Yes.

Dr. Matthai.—The factory is assured of getting the land that it requires for its cane supply?

Mr. Banerji.—Yes.

President.—That is always regarded as a very great advantage to the sugar factories in Java?

Mr. Banerji.—It was not a very great advantage. When they increased their factories they could not get additional land. They had to spend brain, time, energy and money in finding out means to increase the tonnage on the land because the land remained the same while their factory capacity increased.

Here although we have got enough cane, we have no organisation to purchase it. We are clamouring that we do not get enough cane to see us through the season without going through that system of having an elaborate research station and trying to improve the cane and land. That is what I was coming on to. Unless the whole thing is under one organisation I don't think there is any chance for improvement.

President.—Take this question of purchase. What is there to prevent the sugar factories coming together and forming an organisation? If one or two stand out, if your argument is correct, the others will be in a position to bring force to bear on them.

Mr. Banerji.—That had been so in other countries as well. In Java in one lay all these 188 factories did not come in.

President.—It would be a very good thing if all these factories combined for purchase?

Mr. Banerji.—The whole thing is this. Here since time immemorial people had been working as an individual, not in collaboration or in conjunction with others. That is why everybody is suspicious. Every one feels that if he unites with other people he may not get all his supplies.

Dr. Matthai.—What about our village communities?

Mr. Banerji.—I am taking this particular question. People in villages are more progressive because they have taken on to better varieties. In many instances they are irrigating out of wells and all that. They will no doubt come in much sooner than the factories.

Dr. Matthai.—Coming to the organisation of your syndicate, you want the syndicate to be organised as a joint stock concern?

Mr. Banerji.—Exactly.

Dr. Matthai.—With share capital?

Mr. Banerji.—Yes.

Dr. Matthai.—What is the object of share capital?

Mr. Banerji.—I shall tell you. Then that organisation may have its own reserve fund, its own everything.

Dr. Matthai.—I see that your organisation is to levy a certain contribution on every maund of sugar produced?

Mr. Banerji.—On every maund of cane crushed.

Dr. Matthai.—That gives it a regular income?

Mr. Banerji.—Yes.

President.—Is that every year?

Mr. Banerji.—That would be the capital—one pice for every maund of cane crushed.

Dr. Matthai.—Your share capital would be a kind of reserve?

Dr. Matthai.—For its current expenses it would depend on its annual levy?

Mr. Banerji.—Yes.

Mr. Banerji.—Yes.

Dr. Matthai.—The annual levy that you are suggesting would bring the Association about Rs. 8 lakhs.

Mr. Banerji.—Rs. 2,50,000 at the present moment. It may go up later.

Dr. Matthai.—What is your estimate of the amount that would be required for effective agricultural research?

Mr. Banerji.—If they spend a couple of lakhs out of that, they can have field overseers and one man as head.

Dr. Matthai.—You mean for all the factories concerned?

Mr. Banerji.—Yes, up to Darbhanga, men who will work on all those lands from which we draw cane should find out which kind of cane would be suitable and what sort of manure is required.

Dr. Matthai.—Practically the whole of this money would be devoted to the maintenance of your demonstration staff and survey staff?

Mr. Banerji.—Demonstration staff, survey staff and purchasing staff.

Dr. Matthai.—Who exactly does the research under your scheme? After all the question of introducing improved varieties is the essential work. Who is going to undertake the responsibility for that under your scheme?

Mr. Banerji.—You will have to have men for that and have research stations.

Dr. Matthai.—And the syndicate will have to find the resources for that?

Mr. Banerji.—That would come out of its recurring income because it will go on increasing. As soon as you increase your crushing, this Rs. 2,50,000 will go up to Rs. 5 lakhs in three or four years time.

Dr. Matthai.—I suppose that if you are going to have a really effective scheme of development, the best work would have to be done in the initial years?

Mr. Banerji.—Exactly.

Dr. Matthai.—That would be just the period when the resources of your syndicate would be at their lowest.

Mr. Banerji.—I know. At the same time why should not the Research Council come forward and help?

Dr. Matthai.—I am coming to that. Instead of organising the syndicate at present with share capital and the right of levying an annual contribution, supposing out of the proceeds of the protective duty Government sufficiently subsidised the Imperial Council of Agricultural Research, would not that serve the purpose more effectively?

Mr. Banerji.—There are two things. First and foremost, if you do it as a gratuitous work, will the sugar factories take any interest in it? That is No. (1). No. (2) is that if you subsidise the Agricultural Research Institute for this work, the Agricultural Research Institute will have its own man.

Dr. Matthai.—When the Agricultural Research Council last year approached the Finance Member, they said that they wanted about Rs. 10 lakhs. Supposing it was possible to find Rs. 10 lakhs a year for the next 15 or 20 years for the Imperial Council of Agricultural Research for sugarcane research, don't you think that it would be possible on that basis to do far more for development than under your scheme?

Mr. Banerji.—The whole thing is how you do it. If the Government do it, it may be that they won't do what we want. It is only the industry which would realise its difficulties and not the Government. Government of course will do it with all the good intentions and still the industry won't be benefited.

Dr. Matthai.—Precisely how? I don't quite follow.

Mr. Banerji.—I will give you a concrete example. I say everybody is doing what he can with very good intentions but not what another man might want because it may not suit him. For instance the Imperial Council of Agricultural Research want to open out a sugarcane research place somewhere in the Punjab. That is one of the proposals. Now, instead of doing that why not open it in the first instance in a place which requires it?

Dr. Matthai.—You mean in the main sugarcane belt?

Mr. Banerji.—Exactly. I say first develop this area and then divert your attention to some other place. Instead of that you are leaving this behind and going to the Punjab.

Dr. Matthai.—Are they leaving it behind?

Mr. Banerji.—That is what I make out from the papers.

Dr. Matthai.—I understand the Research Council is going to expend all its present resources on the development of the main research centres in these provinces.

Mr. Banerji.—Exactly, but as they think fit, as I said.

Dr. Matthai.—What they are trying to do is to help the United Provinces and at the same time extend the work in other parts.

Mr. Banerji.—Why not complete the good work in Bihar and United Provinces? The Sugar tract goes up from Basti to Darbhanga in Bihar.

Dr. Matthai.—The Punjab man will say that he is neglected.

Mr. Banerji.—Only one factory has been started there and that too is not working properly.

Dr. Matthai.—Have you been in the Punjab?

Mr. Banerji.—Yes. They have got cane, but where have you got factories? First of all make the existing ones stable and then go where you have cane.

Dr. Matthai.—You are quite certain there is no immediate possibility of developing the sugar industry in the Punjab?

Mr. Banerji.—You have got cane right enough, but there is only one factory and it will take several years to develop.

President.—What makes it impossible to develop the sugarcane industry in the Punjab in your opinion?

Mr. Banerji.—Nothing, only capital.

President.—You mean there are no inherent defects in the cultivation of cane which makes it impossible to establish white sugar factories?

Mr. Banerji.—I don't think so. When white sugar factories were established in Bihar their cane was inferior to what you get in the Punjab. There was no organization and you could not get enough cane. Simply because these factories started the position is different to-day.

Dr. Matthai.—Let us get back to the original question. The main difficulty that you suggested was that if research was left entirely in the hands of a body like the Imperial Council of Agricultural Research then the factories on whom the immediate responsibility should rest, would have no interest and would take no initiative in the matter.

Mr. Banerji.—That is it.

Dr. Matthai.—Is it impossible to provide a kind of scheme which would combine the possibility of work being directed by the central agency and at the same time interest being enlisted on the part of local factories?

Mr. Banerji.—That is what I have put down.

Dr. Matthai.—Supposing there was a suggestion that central research, say, with regard to sugarcane breeding would be done by the Imperial Council of Agricultural Research and under their supervision seed farms, administration work and so on would be undertaken by local factories and a certain amount of assistance was given by the Imperial Council to factories which are prepared to undertake that kind of work, would not that combine the two essentials?

Mr. Banerji.—Naturally it will come to that later on, but what I mean is this. Unless the factories put in money into the scheme they would not pay sufficient interest. Let the Research Council come forward with such money as they can, but at the same time there must be some money put in by the companies.

President.—Would you suggest that in the Act there should be a clause empowering the Governor General in Council to levy a cess on sugar factories for the purpose of financing an institution of this sort?

Mr. Banerji.—If they don't give voluntarily there should be some Act as you suggest; if they do it voluntarily it would be to their own benefit.

Dr. Matthai.—Your point is that there must be a certain amount of responsibility laid on the factories themselves?

Mr. Banerji.—That is my suggestion. There may be better suggestions, but this is simply to show the way.

Dr. Matthai.—You can't depend on the sugar factories doing this work really satisfactorily unless they were to a certain extent made to pay for it?

Mr. Banerji.—Exactly.

President.—As regards bounty where would you draw a line between the khandsari and the sugar factories?

Mr. Banerji.—A factory employing power rollers and employing vacuum for its evaporation I would call a modern factory. Factories evaporating their juice in open pans I will call khandsari because in that you are losing your-

sucrose; you are burning it and losing so much money for nothing. I have shown that in making *gur* this country loses Rs. 40 crores a year.

President.—You would draw a line there: however small a factory as long as it employs power roller?

Mr. Banerji.—It must be 150 tons a day at least.

President.—Wouldn't there be difficulty in laying down any particular limit?

Mr. Banerji.—Now the tendency is this, that anybody coming in for a sugar factory does not go in for anything less than 400 tons. A new factory coming in will have 600 tons.

President.—We saw in Madras a very small factory with power roller and vacuum process. I suppose that would be the only condition you would lay down, that they must have these two?

Mr. Banerji.—Yes.

President.—What about the *gur* industry? I understood you to say that when you were in Java you found that there was an elaborate arrangement in progress to flood the Indian market with *gur*. That was last year?

Mr. Banerji.—I shall tell you what they did. Dr. Techelhar who was their Director of Statistics sent his Secretary to see me a few days after my arrival in Java and then he came and saw me and took me over to his place and kept me as his guest and then I found out that he was pumping me the whole day as to what the market for *gur* was, what was suitable for refineries, what was suitable for direct consumption and all that sort of thing. Since 1923-24, they have nearly renovated all their factories; some have been built new and the old machinery has been discarded. The extra cane, they want to crush somehow or other in those old places, evaporate them, convert them into *gur* and send them out here.

President.—What about this elaborate arrangement? Have they been completed yet?

Mr. Banerji.—I don't think so but they are making arrangements; they are just rigging up some of the machinery. Last year and this year they have sent some *gur* to India experimentally.

Dr. Matthai.—Did you see some of their *gur*?

Mr. Banerji.—Yes. The Lucknow people are using it.

President.—It is very dark *gur*?

Mr. Banerji.—Yes, it is black.

Dr. Matthai.—It is used only for refining?

Mr. Banerji.—Yes, because they can make that rather cheaper than *gur* for direct consumption.

President.—Would you admit that it would be a serious matter if *gur* were to come here at such a price?

Mr. Banerji.—Yes, they would probably make *gur* at Rs. 2 a maund and with the means at their disposal for transport—the Java Bengal Line—the Bengal market will be swamped.

President.—This *gur* will not only be used to replace Indian *gur* used for refining as at present but it will also be treated as eating *gur* and thereby replace that in the market. What steps would you propose to take to meet that?

Mr. Banerji.—I would propose, to meet that, this *gur* should have a protective duty of as much as sugar.

President.—You only propose a comparatively small duty on sugar?

Mr. Banerji.—I say that a change of classification should be made and instead of 25 per cent. *ad valorem* as at present foreign *gur* should pay a specific duty similar to that levied on white sugar.

President.—Then your proposal is to keep this Rs. 6?

Mr. Banerji.—By all means.

President.—Do you think Rs. 6 would be sufficient to protect the *gur* industry?

Mr. Banerji.—I should think so.

President.—That would be a higher rate than in force at present. You think Rs. 6 would adequately protect the industry?

Mr. Banerji.—Yes.

Dr. Matthai.—You want the duty on sugar to be applied to *gur* rather than the duty on molasses?

Mr. Banerji.—I propose a high duty on molasses but to protect the *gur* industry in India I want a higher duty on *gur* because once they send *gur* cheap and once the refineries take to this *gur* it will mean that they will send out of work all these cultivators who are cultivating cane for making *gur*. That will be a very great economic crisis.

President.—What about sugar below 23 D. S.?

Mr. Banerji.—On all sugar I say put Rs. 6.

President.—Some of the brown sugar imported is being used for adulterating *gur* at certain times of the year when the price of *gur* is high and you think an additional 8 annas would be sufficient to stop that?

Mr. Banerji.—If it does not stop altogether it would rather make it difficult.

President.—Your scheme then is, a duty of Rs. 6 on all classes of sugar including *gur*; molasses which I suppose you would define as not containing more than 83 per cent. sucrose would also carry a heavy duty, as compared with the present duty of Rs. 3 a cwt. and out of the residues from this a portion of the revenue should be made over by way of bounty to white sugar factories, defining as white sugar factory any factory which uses power rollers and vacuum process. Is that correct?

Mr. Banerji.—Yes.

Dr. Matthai.—Supposing we decided to recommend protection have you any idea for what period protection should be fixed?

Mr. Banerji.—Unless these sugar factories improved themselves this protection will have to be kept indefinitely. That is why I suggest that a condition precedent should be that they should give an assurance that they will improve.

President.—They have improved very much within the last 10 years?

Mr. Banerji.—In the factory but not on the field. Here are some figures—

	Metric tons per hectare.	
India, 5 years up to 1929	2.66	
Formosa up till 1922	3.33	
Formosa since then	6.05	
Phillipines, out of newly planted cane they get	6.00	
St. Negros is rather low	2.8	
Java, up to 1918	10.00	
Java, since then	16.00	
Louisiana, 1927-28	2.11	
Cuba (average on 11% outturn)	5.00	
San Domingo (average on 10% outturn)	6.00	
Porto Rico	10.6	
Peru, in three years	10.11	
Argentina, in 1927	2.78	} on 10.5% to 6.08.
Mauritius	4.75	
Queensland, in 13 years	4.78	
Hawaii	14.3	

and we are making only 2.66 tons.

President.—That is for the whole of India?

Mr. Banerji.—Yes.

President.—What about the area in the sugar tract?

Mr. Banerji.—It must be less than that because in Bombay and Madras they turn out more cane. We can take this on an average. Unless they can improve their cane, the method of transport and things like that, improvement in the factory alone will not be of much good to them.

President.—I would not take that figure as applicable to the white sugar tract.

Mr. Banerji.—I don't say you take that figure necessarily but approximately. It is like this: hemja cane, for instance, won't give you a yield of more 850 maunds.

Dr. Matthai.—That is a very high estimate.

Mr. Banerji.—I can give you the exact figures. Here they say 1·5 tons of sugar per acre or something like that. These are Mr. Macmillan's figures who was Manager of Marhowrah factory.

President.—Mr. Clarke told us that the acreage under the improved canes in the United Provinces has increased very largely.

Mr. Banerji.—This side?

President.—Surely the area under improved cane has shown some improvement in outturn.

Mr. Banerji.—By United Provinces he means Pilibhit, Shahjahanpur and not the cane district. In January I read a paper comparing the sugar industry of different places. There I had estimated that the land under improved variety of sugarcane in the white sugar tract is 20,000 acres out of which Samastipur, Ryam, Lohat factories crush mostly Coimbatore canes. Champaran sugar factory crushes a portion. When you come to Saran and Gorakhpur Districts the percentage is very little. I tried to find out exactly how much acreage was under this improved variety from Mr. Wynne Sayer. He evidently doesn't keep any record. Still for these past three years hybrid varieties are being planted in Gorakhpur and Saran Districts and it is increasing. I don't think it would be anything over 8 per cent. this year. I cannot give you any exact figures, but that is the idea I have formed.

President.—The white sugar tract would not give more than 8 per cent.?

Mr. Banerji.—Baruing these particular factories Samastipur, Ryam and Lohat.

Dr. Matthai.—That would be under 1½ tons of sugar per acre.

Mr. Banerji.—That would be more than 1½ tons.

Dr. Matthai.—What yield would you take for Coimbatore variety per acre?

Mr. Banerji.—600 maunds or something like that.

Dr. Matthai.—And you take 8 per cent. of that?

Mr. Banerji.—8·5.

Dr. Matthai.—That would give you slightly over 1½ tons.

Mr. Banerji.—Yes, and the rest will give 1½.

President.—As regards the suggested remedy of yours, it occurs to me that perhaps the rest of India might feel that the *gur* industry is being rather neglected for the benefit of the white sugar industry. This proposal does not go any way towards increasing the output of improved canes in those portions of India where there are no sugar factories established.

Mr. Banerji.—If people find that sugar is a paying proposition, if they start sugar factories and in the beginning for a few years they get protection from Government, I believe capitalists will come forward and several more sugar factories may be started.

President.—In this part of India?

Mr. Banerji.—May be in this part or any other parts of India. For this reason, that during the war when the price of sugar went up there were several enterprises in this part of the country and two in Bombay.

President.—Of which one has gone bankrupt.

Mr. Banerji.—Baramati Sugar Factory, but they had chosen a wrong place. There the price of sugarcane is fixed on the price of *gur*. That is why it doesn't matter what they do in different parts of India. In those parts where you can get a good profit, why not start factories? There is a very large field here on the Pilibhit side where several factories can be started. In the Champaran District there is room for factories; then on the line from Bhatni right up to Benares two or three factories may be started. The whole place is full of cane.

President.—Would you recommend that anything should be done for the cultivator of cane in the way of guaranteeing him some price?

Mr. Banerji.—You cannot guarantee any price. Guaranteeing a price may be to his benefit or may not be to his benefit, because later on if the factory gets a better price for sugar, he gets a better price for his sugarcane otherwise he does not. I don't recommend any sliding scale, not a bit of it.

Dr. Matthai.—Why?

Mr. Banerji.—There may be some good points in it, but there are several drawbacks. If you make a sliding scale you always pay for your sugarcane on that sliding scale and very little margin is left for your profit. When the price of sugar is high you pay more price for your cane. Your margin of profit remains very much the same always.

Dr. Matthai.—If the price of sugar rises under the sort of sliding scale that they have in Bihar for example?

Mr. Banerji.—Not in every factory.

Dr. Matthai.—In the few factories which observe the sliding scale if there is a rise in the price of sugar, a proportion of the increased profit will go to the factory and a proportion will go to the cane grower. Do you object to that?

Mr. Banerji.—I do. That means more for your sugarcane.

Dr. Matthai.—The cane grower must share in the benefit. It is not a question of the cane grower getting all the profit, he only shares the benefit.

Mr. Banerji.—Why not pay him an open price? If the factory works at a loss, the cultivator would not sell his cane at a loss. If the sugar is selling at a higher price, he will naturally get a better price for his cane.

Dr. Matthai.—How naturally? Supposing there is a buyers' combine, the growers will be at their mercy.

President.—Supposing there is an agronomic organisation?

Mr. Banerji.—You can't do that in India, because if he finds that you are doing him in the eye, he will start making *gur*. The next day he won't sell you cane. He has got that weapon against you.

Dr. Matthai.—You take the sliding scale. Supposing for example under the sliding scale at present the man gets a price for his cane which is the equivalent of the *gur* price of cane. If there is an increase in the price of sugar under the sliding scale the cane grower may get a price for his cane slightly better than the price he would get if he turned cane into *gur*. If your factory refuses to pay him the higher price, the fact that there is competition from *gur* would not under these circumstances help him.

Mr. Banerji.—So far I agree. He must always get a better price for his cane than what he can get for making *gur*, otherwise he won't make any improvements and you can never be certain of the cane. That is why I have already suggested that there should not be a buyers' combine. You should look at the optimum conditions of getting good cane and keeping the raiyat pleased, because you can't get out of him.

Dr. Matthai.—It is very difficult to organise a Syndicate of factories which would not the whole time look to the interests of the factories.

Mr. Banerji.—At the same time you have got to look to the interests of the cultivators.

Dr. Matthai.—You have got to evolve a different kind of organisation. you will probably have to hand over the whole thing to Government.

Mr. Banerji.—Not necessarily, but from what I have seen in Java and Formosa they have got something like this there as well. This sort of organisation, although the capital has been supplied by the factory, is quite independent of the factory. They are not under any factory or all the factories combined together. They would look to the interests of the factories as well as to the interests of the cultivators if they are more or less a third party. The Executives of the Syndicate would not be members of any factory but independent persons.

Dr. Matthai.—Without knowing very much about it I should say that the interests of the cultivators are definitely looked after by the Government in Java and not by the Syndicate.

Mr. Banerji.—Yes, by the Government. Here too I have suggested a Government man who will be on the Board and I don't object to a few Government workers working there and looking after the show.

Dr. Matthai.—There are definite regulations in force in Java to protect the interests of the sugarcane growers.

Mr. Banerji.—I know.

Dr. Matthai.—You don't have it in this country.

Mr. Banerji.—No, and those interests are these. They don't go beyond these. There are 3 or 4 things that a factory has got to satisfy the Government about. One is this : that there is sufficient land on which cane can be grown, that is $\frac{1}{3}$ rd of rice land and even then there would be no economic loss to those people. No. 2 is the factory has got to satisfy the Government that they will make adequate arrangements for irrigation. No. 3 is that they will put manures and all that on the field. If the Government is satisfied about these three things then they have got an agreement drafted out which the factory has got to sign and in which they see that all the interests of the cultivator regarding the land have been protected. Then again the Government has got to decide that if they take away $\frac{1}{3}$ rd of the land every year, that won't be any distress to the people and things like that. These are the points which the Government looks after, but as regards the cane they fix the price on an average of what he could earn on those rice fields. Generally it is Rs. 40 per acre or near about. Besides that the Government doesn't do anything. Improvement of the land is looked after by the factory.

Dr. Matthai.—We understand that. Have you been in Formosa as well?

Mr. Banerji.—Yes.

Dr. Matthai.—What is the organisation in Formosa? There is nothing corresponding to this Syndicate in Formosa, is there?

Mr. Banerji.—Yes, there is.

Dr. Matthai.—I suggest that the main distinction between Formosa and Java is that in Java the business is in the hands of a Syndicate whereas in Formosa the development and research are mainly in the hands of Government?

Mr. Banerji.—These 48 factories are managed by 3 or 4 organisations in Formosa. I don't exactly remember just now. I haven't got the notes here.

Dr. Matthai.—Can you tell me briefly who provides the funds for research in Formosa?

Mr. Banerji.—I am just coming on to that. There are three Government departments and three or four departments run by the industries for different things. For the Government departments there, the funds are provided by the Government and for the factory organisations the factory provides them with funds.

Dr. Matthai.—Is there any subsidy given by the Government to the industry for research?

M. Banerji.—I don't think so barring to the departments of factory organisations.

Dr. Matthai.—My impression is that the main distinction between Formosa and Java is that the funds required for research in Formosa come from Government whereas in Java the funds are collected and distributed by the Syndicate.

Mr. Banerji.—No.

Dr. Matthai.—The Japanese Government adopts a paternal attitude towards industries.

Mr. Banerji.—It does, but it is not a fact, because their cane breeder—I forget the name Dr. somebody—is interested in one of these Chinese factories or Japanese factories in Java. He takes all his bits from Java and then they are shipped on to Formosa. He goes to Java every year and he is sent by that organisation which is run by the factories. There are three organisations exclusively run by Government and nearly 8 or so by the factories and they all work in conjunction.

Dr. Matthai.—Have you any idea of the annual expenditure on sugarcane research in Formosa?

Mr. Banerji.—That I couldn't tell you.

Dr. Matthai.—You have no idea of the annual contribution levied by the Central Organisations in Formosa?

Mr. Banerji.—That too I could not tell you. In Java we calculated. It comes to Rs. 17 lakhs.

Mr. R. C. SRIVASTAVA.

Oral evidence of Mr. R. C. SRIVASTAVA, B.Sc., Sugar Technologist to the Imperial Council of Agricultural Research, recorded at Bombay on Thursday, the 15th January, 1931.

President—Mr. Srivastava, your position is that of Technologist to the Imperial Council of Agricultural Research?

Mr. Srivastava.—Yes.

President.—What is your official designation?

Mr. Srivastava.—Sugar Technologist to the Imperial Council of Agricultural Research.

President.—And you took up this appointment when?

Mr. Srivastava.—In July last.

President.—Before that, what post did you hold?

Mr. Srivastava.—I was holding the post of Deputy Director of Industries under the United Provinces Government.

President.—In that capacity you were doing a certain amount of technological research at the Harcourt Butler Technological Institute?

Mr. Srivastava.—The post of Deputy Director of Industries is an administrative post, not a research post, I had all the technical education of the province under my administrative control. I was the only technically trained officer at the headquarters of the Department. The Technological Institute was also directly under me, and I thus had an opportunity of conducting research work and giving advice.

Mr. Rahimtoola.—You were sent by the United Provinces Government to Europe for further studies?

Mr. Srivastava.—No, I was sent by the Imperial Council. I took over this post on the 4th of July and I sailed from Bombay on the 12th of July. I was sent by the Government of India to Europe and America.

Mr. Rahimtoola.—Soon after your appointment?

Mr. Srivastava.—Yes, soon after my appointment.

President.—Previous to your appointment as Deputy Director of Industries in the United Provinces, you held a post as Manager of a cane factory?

Mr. Srivastava.—I was connected with the Sugar Industry since 1916. I was at first in Begg Sutherland's. I worked in two of their cane factories and one refinery and I managed their Cawnpore Distillery for three years. Then I left them and joined another firm whose head office is in Bombay. I designed and built a new factory for them at Pachrukhi in Saran District—a factory called Bihar Sugar Works—and managed it from 1920 till 1928 when I took over the post under Government.

President.—As regards this statement of the case which you have put before us, it is very clear—you must have taken a lot of trouble in preparing it—and personally it seems to me that the views are so clearly expressed—whether I agree with them or not—that there is really very little to cross-examine you on. There are very few points left for you to elucidate. Perhaps the best way will be to go straight through your memorandum merely drawing attention to any points regarding which I have doubts as to your meaning. You refer to the rate at which the consumption of sugar is increasing from year to year. You have taken it on the last three years' figures.

Mr. Srivastava.—Yes.

President.—You think that that is a sufficiently long time?

Mr. Srivastava.—No. I would not say that the increase in consumption is likely to continue at this rate, but it is for the sake of argument and for

comparison with the corresponding period of the all-world consumption that I have taken this.

President.—Then, this is merely for illustration?

Mr. Srivastava.—Yes.

President.—I mention it because sometimes people speak of this 1 million tons of sugar that is imported as if it is an entirely new feature, but I find that in 1909-10 there was as much as 630,000 tons of sugar imported into India.

Mr. Srivastava.—Yes.

President.—What has happened is that India has now not only returned to the level at which the imports were before the war, but is also satisfying those demands which have grown in the last 17 years.

Mr. Srivastava.—Quite.

President.—So that it is likely that the rate of increase which has been going on say for the last five years will probably not continue?

Mr. Srivastava.—Quite likely.

Mr. Rahimtoola.—Can you give me an idea as to what will be the rate of increase, if not 50,000 tons per year as estimated by you during the last three years?

Mr. Srivastava.—My estimate is that if the price of sugar continues at the present low level, more sugar and less *gur* will be consumed. Sugar will replace *gur* more rapidly but the exact extent to which this replacement will take place is, I think, very difficult to estimate in terms of percentage.

Mr. Rahimtoola.—But do I understand that if the sugar price remains as it is, then there would be an increase similar to what has been in the last three years?

Mr. Srivastava.—It may not be exactly 6 per cent., but I should think that it will not be under 4 per cent. It will be some figure of that order.

Mr. Rahimtoola.—What do you consider to be the present price? Is it in the neighbourhood of Rs. 8?

Mr. Srivastava.—The latest quotation is about Rs. 8-3-0 in Calcutta.

President.—I notice you speak of the Indian sugar industry as displacing the indigenous *gur* industry. Now I understand that there is a school of thought which thinks that the consumption of *gur* should be stopped altogether. The point was referred to us when we were examining the Punjab Government. I take it that you don't belong to that school. You don't want to see the consumption of *gur* displaced?

Mr. Srivastava.—My own view is that *gur* is a commodity entirely distinct from sugar as far as the question of satisfying the requirements of the Indian population is concerned. You are doubtless aware that even in Java where the sugar industry is organised to a much larger extent than it is here, they have raw sugar—what they call Goela Tamboek—which is consumed by the native population there,—not to the same large extent as it is in this country but still to a fairly large extent. When I was in Europe recently I had an opportunity of discussing this point with Dr. Prinsen Geerligs. He emphasised the same point. He said that it would be unwise if not impossible for us to try to kill the *gur* industry. It has got a place of its own in the economy of the country and we cannot afford to kill it. He illustrated his argument by referring to Java.

President.—Have you any information about the amount of either cup sugar or Goela Tamboek which is turned out in Java? We were told that it was about 25,000 tons a year.

Mr. Srivastava.—I have the figure somewhere. I cannot tell you off-hand. But I think that it will not be anything very much more than 20,000 to 25,000 tons.

Mr. Rahimtoola.—Will you kindly explain this sentence “Finally in the present general depression, when the prices of all exportable crops have gone

down, if by the imposition of a protective tariff on sugar, the return on cane is increased, the cultivator will be afforded a much needed relief"? You have mentioned 8 annas as far as I have been able to understand.

Mr. Srivastava.—7 annas net to the grower.

Mr. Rahimtoola.—You say that eight annas should be the figure roughly.

Mr. Srivastava.—Yes.

Mr. Rahimtoola.—Is that a sufficiently attractive price for the cultivator to sell his cane to the sugar factory rather than make it into *gur*?

Mr. Srivastava.—Yes.

Mr. Rahimtoola.—Do I understand that eight annas would be a sufficient inducement to the cultivator.

Mr. Srivastava.—I have given certain figures showing the cost of cultivation of cane in some typical areas in Northern India. You will find from Appendix M that the average cost comes to 4 annas 1 pie per maund. To this we have to add one anna per maund on account of interest and provision for bad harvest. So the figure comes to 5 annas 1 pie. If the cultivator gets 7 annas per maund, he gets approximately 2 annas per maund more as an inducement for supplying cane to the factory. Now 2 annas per maund on a crop of say 500 maunds will be about Rs. 65 per acre. I think that that should be a fair inducement to the cultivator.

Mr. Rahimtoola.—Do you think that at the same price he will be able to sell to the khandasari in the Rohilkhand area?

Mr. Srivastava.—That is a very difficult question. I have given you the costs of production of sugar and *gur* by the khandasari process. I have taken the price of sugarcane there at 3 annas 6 pies in eastern districts and 5 annas in western districts and even then the cost of production of sugar and *gur* comes to a much higher figure than in the case of factories.

Mr. Rahimtoola.—Suppose we fixed 8 annas as the price to be paid to the cultivator. Will you suggest to us the method by which it can be enforced?

Mr. Srivastava.—It cannot be enforced by merely imposing a protective duty. You have no means of doing it in that case. If you have a system of subsidy you can enforce it. That is one of the strongest arguments in favour of giving assistance by means of subsidy and not by means of merely a protective duty.

Mr. Rahimtoola.—You say "It is clear from the above that Java can send sugar to India at Rs. 3-12-0 per maund c.i.f. and may, if forced, lower this figure to even Rs. 3-8-0 per maund". Do I understand you to mean that there is no chance even if the worst conditions prevail or under any future contingencies that the price would be lower than Rs. 3-8-0 per maund?

Mr. Srivastava.—It will be difficult to prophesy on that point. The present depression in the world sugar market is due to the large production of sugar in Java and Cuba. Cuba differs from Java in one very important respect, namely, that it is practically bankrupt. The Cuban sugar industry is controlled entirely by American bankers. They are not going to finance the Cuban industry any longer, if they do not get a sufficient return for their capital. The case in Java is different. The Javan factories have huge reserves and I should think that even if the present depression continues for another two or even three years the Java factories can afford to go on, by drawing on their reserves.

Mr. Rahimtoola.—You have yourself admitted that it is very difficult to get the exact costs from the Java people because they do not give or do not publish their costs since 1926-27. You have put down here that Java, if forced,—I suppose by competition and over-production—may come down to Rs. 3-8-0. I want to know whether there is any likelihood, according to what you have heard and read, that the figure could go lower than Rs. 3-8-0 per maund?

Mr. Srivastava.—I think that the lowest limit to which they might go may be taken as Rs. 3, but that will come under the category of dumping.

Mr. Rahimtoola.—There is a possibility of their figure going down to Rs. 3?

Mr. Srivastava.—I will invite your attention to an extract which I have given, from which you will find that there is likely to be a fresh source of severe competition in India from Russia.

Mr. Rahimtoola.—We will come to that presently.

Mr. Srivastava.—What will happen to Java prices when the Russian competition sets in in right earnest we cannot foresee.

Mr. Rahimtoola.—That means you seriously believe that there will be in future Russian competition?

Mr. Srivastava.—I think it is almost certain because the rate at which the Russians are buying machinery for putting up large sugar factories in Russia is surprising. They are placing orders for several plants at a time. When I was in Germany I saw the Russian people all over the country busy buying machinery, and when they begin to produce on such a large scale, they must sell the sugar somewhere.

President.—You have enumerated various charges from Calcutta to Cawnpore.

Mr. Srivastava.—Yes.

President.—Is the terminal charge included in this railway freight of Rs. 1-4-6?

Mr. Srivastava.—That is octroi, which is the next item.

President.—By terminal charge I mean the railway terminal charge?

Mr. Srivastava.—This is all that they have to pay to the railway.

President.—They have to pay Re 1-4-6 plus 0-1-6?

Mr. Srivastava.—This octroi goes to the municipality.

President.—That is called terminal charge?

Mr. Srivastava.—Yes.

President.—That makes it Re. 1-6-0?

Mr. Srivastava.—Yes.

President.—The interest of Re. 0-1-6, what exactly does that represent?

Mr. Srivastava.—The people who buy sugar in Cawnpore from Calcutta have to draw hundis. This amount represents the interest on hundis.

President.—Taking sugar at Rs. 8 a maund in Calcutta, I suppose it would take two days to reach Cawnpore.

Mr. Srivastava.—All these figures I have given you, I may mention, are fairly old, having been obtained in 1926. I have brought with me some new figures which however do not differ much from those given in my statement. These figures I got only last week (handed in).

President.—The railway freight remains the same as you show here?

Mr. Srivastava.—Yes.

President.—But the allowance for shortage of sugar in transit is reduced from 3 annas to one anna owing to the use of single bags.

Mr. Srivastava.—The reason for that is that the price of sugar is less.

President.—I don't see any interest charges in this list at all.

Mr. Srivastava.—No. These are different figures from different merchants. I have got from three sets of people three different figures.

President.—What is this 'arhat'?

Mr. Srivastava.—That is brokerage at Calcutta.

President.—Exactly what does that represent? Is that what we should call importing agents' commission?

Mr. Srivastava.—It would not be that. Sugar is purchased through brokers from importing merchants. Big firms in India who import Java

sugar sell the sugar to buyers through brokers and this is the commission of those brokers.

President.—What is this brokerage of 6 pies?

Mr. Srivastava.—This brokerage will be, I think, the commission of the importer.

President.—Comparing the prices of imported sugar and Indian sugar at Cawnpore, a number of these charges will have to be borne by the Indian sugar also?

Mr. Srivastava.—I have given the figures for that also. I have given detailed figures for three factories, viz., Pachrukhi, Ghugh and Champaran. I have given freight, octroi, cartage and palledari.

President.—What is palledari?

Mr. Srivastava.—That is the wages to the men who carry the bags from the wagon to the cart.

President.—Are these included here in the other list?

Mr. Srivastava.—Yes.

President.—I suppose there is interest also to be paid on the sugar in transit even on this Indian sugar?

Mr. Srivastava.—No. The system in that case is different. The Indian factories get the price when it is paid by the buyer.

President.—What do you allow for interest in the case of imported sugar?

Mr. Srivastava.—One anna.

President.—I suppose shortage occurs in Indian sugar too?

Mr. Srivastava.—No, there is not much shortage in Indian sugar. The average figure for charges for these three factories comes to 0-10-6. I have compared that with the Java price in this way. The present Java-Calcutta price is Rs. 8-3-0 per standard maund. If we add Re. 1-9-0 to that we get Rs. 9-12-0. If we compare it with the Indian price, we find that the present Pachrukhi mill delivery price is Rs. 9; if we add freight and charges to that we get Rs. 9-11-0, or practically the same as Java, so that the advantage in favour of Pachrukhi is Rs. 9-0-0 minus Rs. 8-3-0=0-13-0. I have taken 12 annas as the figure.

President.—You say the items which the Indian factories have also got to pay are octroi and freight. I suppose there would be an allowance for shortage of sugar in transit in the case of Indian factories?

Mr. Srivastava.—Not in Indian factories. They are now sending sugar in single bags. Their sugar sells by the bag and not by weight. It is presumed that each bag contains $2\frac{1}{2}$ maunds.

President.—Do you mean to say that imported sugar is not sold by the bag?

Mr. Srivastava.—No. Java sugar is re-weighed.

President.—So roughly the addition to the price of imported sugar is somewhere about Rs. 1-12-0?

Mr. Srivastava.—I think Re. 1-9-0 will be more correct now according to the current market price.

President.—That will include the importers commission of 6 pies?

Mr. Srivastava.—According to these figures the importers commission is included in the Java-Calcutta expenses.

President.—If you will let us have a copy of the statement it will be useful.

Mr. Srivastava.—I will.

President.—You make it Re. 1-9-0?

Mr. Srivastava.—Yes.

President.—So that if the price at Calcutta is Rs. 8-2-0 the price at Cawnpore will be Re. 9-11-0?

Mr. Srivastava.—Yes.

Mr. Rahimtoola.—You mention that 5 per cent. profit would be sufficient inducement for the capitalist to come forward and build factories.

Mr. Srivastava.—I have not said "sufficient", I have said "minimum".

Mr. Rahimtoola.—But you think a minimum of 5 per cent. would attract capital?

Mr. Srivastava.—I don't think that would attract capital sufficiently readily.

Mr. Rahimtoola.—If I am a capitalist I would naturally ask myself what would be the amount which would be sufficiently attractive. What would you put it at then?

Mr. Srivastava.—I think 10 per cent. will be correct.

Mr. Rahimtoola.—You say that "the only remedy for a default will lie in periodical reviews by the Tariff Board. Obviously this is not a satisfactory system and it is desirable that it should be more or less self-adjusting." What do you mean by 'self-adjusting'; do you mean, leave it to Government to take action by executive order?

Mr. Srivastava.—No. If we can devise a system in which those factories which improve their efficiency will get more assistance automatically than others which do not increase their efficiency, I would call that system self-adjusting.

President.—Coming to your distinctive proposal, that is to say the suggestion that the assistance should be by means of a bounty in which factories are subsidised according to their efficiency, and provision regarding price at which cane should be purchased and so on, I am not quite clear exactly what you intend your scheme to imply. For instance, in order to supervise this scheme and see that it works satisfactorily and there is no attempt to defraud on the part of factories, it would obviously be necessary to have some staff. What sort of staff do you contemplate?

Mr. Srivastava.—I would provide one officer at each factory similar to Excise Inspectors at distilleries.

President.—At about the same pay I suppose?

Mr. Srivastava.—Yes.

President.—And men with about the same qualifications?

Mr. Srivastava.—Yes. That is all the staff you will need at the factory.

President.—That will be one to each factory? What sort of pay would you suggest?

Mr. Srivastava.—Rs. 150 to Rs. 200.

President.—Would you provide any supervision of the Inspectors?

Mr. Srivastava.—It will depend on the administrative arrangements most convenient to Government.

President.—Do you contemplate that this department would be administered by the Central Government or by the Provincial Government?

Mr. Srivastava.—This will be an all-India scheme so it should reasonably be under the Central Government.

President.—On the other hand Industry is a transferred subject.

Mr. Srivastava.—It is. I have no objection at all if it is placed under the provincial government, but there will have to be uniformity in the rules for all the provinces because the system of subsidies will be the same everywhere in India.

President.—Who will make the rules?

Mr. Srivastava.—The Government of India. I take it 'Customs' from which the revenue will be received will continue to be a Central subject.

President.—Who will pay for the Inspectors?

Mr. Srivastava.—Allotment will have to be made by the Government of India to the provinces.

President.—There may be difficulties.

Mr. Srivastava.—Does this mean that if the Government of India want to introduce a measure of this kind, which, we may assume, is in the interest of a particular industry, then they will be precluded from putting that into force by the financial rules?

President.—I am trying to find out what exactly it is that you propose. The proposal I understand now is that this staff should if possible work under the Central Government. Is that correct?

Mr. Srivastava.—It will lead to uniformity if it did.

President.—We will try to get your scheme as far as possible. Your scheme is that there should be a definite staff under the Central Government which should be in charge of sugar factories and should check the various returns, its polarization of the sugar, its sucrose content of the cane.

Mr. Srivastava.—He will not have to test the sucrose content of cane in every case. As a matter of fact with the sugar factories as they are at present, sub-para (g) of my note will be almost inoperative.

President.—What I mean is that if it is operative in that case he will have to check the sucrose content.

Mr. Srivastava.—He may. The system in England where there is a subsidy system is that factories are required to submit statements signed by Directors of the company and the Government accept these as correct although they have a right to check these. The farmers who supply the beetroot have their representatives going round the factories and if they find anything suspicious they can raise the question and get the figures checked.

President.—One can't imagine the Indian cultivator going round the factories.

Mr. Srivastava.—I don't think it is so impossible. When I was managing sugar factories I have had many cases like that with people supplying *gur* and also sometimes with people supplying cane. Although there was no system of analysing cane, many a time we have had cases when people supplying *gur* suspecting the analyses on which prices were based sent samples to be tested in outside laboratories.

President.—They would be rather better off people than ordinary cultivators?

Mr. Srivastava.—This scheme would not apply to the ordinary cultivator but to cultivators having at least 500 acres under cane. It is clearly mentioned here. I say here that there are two conditions to be satisfied, one is the sucrose content and the other is that the cane is grown either on lands owned or leased by the factory or on land over which the factory has complete control or on land cultivated by co-operative societies having at least 500 acres under cane.

President.—After you have got the staff do you propose any supervising staff?

Mr. Srivastava.—You will have to have officers like Assistant Excise Commissioners for distilleries.

President.—On about Rs. 500 a month?

Mr. Srivastava.—About that.

President.—How many of these would you have?

Mr. Srivastava.—It will depend on the number of factories. As factories are at present I should think two men will be sufficient for Northern India from Bihar right up to the Punjab.

President.—Say one for 15 factories?

Mr. Srivastava.—About that.

President.—Under which department will they work?

Mr. Srivastava.—I am afraid I am not conversant with the details of the organization of the Government of India at the centre.

Mr. Rahimtoola.—Does it not follow that in order to carry out successfully your scheme it is desirable to find suitable machinery? That is the reason why we want to find out whether you have considered that aspect of the question and if so what are your suggestions.

Mr. Srivastava.—At each factory we want one Inspector and we want a supervising Officer for 15 factories. Under which department of the Government of India this whole organisation will work, I am not able to say straightway, because I don't know how the work is allocated in the Government of India.

Mr. Rahimtoola.—Do I understand that your idea is that this should be managed by the Imperial Council of Agricultural Research?

Mr. Srivastava.—Certainly not. The Imperial Council of Agricultural Research is only a research body and it has no administrative functions as far as I am aware. It will have to be under some regular department of the Government of India. Whether it is Education, Health and Lands or any other department I cannot say.

Mr. Rahimtoola.—It has already been pointed out to you that the main difficulty is that Industry and Agriculture being transferred subjects the Ministers would resent any interference or any control over their subjects by the Central Government

Mr. Srivastava.—May I suggest a rider to this? Assuming it is admitted that a system of subsidy will tend to the expansion of the industry more rapidly than a pure protective tariff and assuming that the only difficulty lies in devising an administrative machinery, may we not refer this latter question of administrative machinery to the Government of India to advise us?

President.—We advise the Government of India and the Government of India does not advise us. There is another point which you refer to here which seems somewhat beyond the scope of our enquiry. You don't give definite reasons for suggesting that an impetus should be given to the manufacture of sugar machinery in India. The question of a subsidy to sugar machinery or other machinery is beyond our terms of reference. We have no evidence to show whether sugar machinery can be manufactured cheaply or cheaper than it can be imported or what the costs are. Practically we have no evidence.

Mr. Srivastava.—If it is not within your terms of reference you may leave it out of consideration.

President.—There is another small point. You suggest that if the market price of sugar exceeds Rs. 10 per maund c.i.f. a countervailing tax should be levied on the manufacturers. How would you work that exactly? Supposing the price of sugar goes up to Rs. 10-8-0 next week and stays there for a month, how are you going to put a countervailing tax? Would you charge an extra tax?

Mr. Srivastava.—It cannot be for a week or a month. You will have to go by the average for the season or the average for the whole year.

President.—Then you get a great difficulty, because the factory owner may say "it is very unfortunate that I have not been able to get this Rs. 10-8-0 I have sold my sugar at such and such a time and I only got Rs. 9-4-0". It would be very difficult.

Mr. Srivastava.—This will really be operative if the price of sugar goes very high. What I had in my mind when I made the suggestion was that if the factory is getting a subsidy of say Rs. 3 a cwt and the price of sugar goes up to Rs. 15 or Rs. 20 then it will be unfair to continue to give the subsidy.

Mr. Rahimtoola.—You mean unfair to the consumer?

Mr. Srivastava.—Yes. We will not naturally stick to Rs. 3 a cwt. If the price of sugar goes up to Rs. 10-1-0 or Rs. 10-2-0, then we would not bother.

President.—That is what I really wanted to ascertain. I understand your scheme is, if there is a very big change which brings the price of sugar for a considerable period well above Rs. 10, some sort of notification should be issued under which an excise duty of whatever the difference is between Rs. 10 and the average price should be imposed and again if there is a distinct change in the market price that might be taken off.

Mr. Srivastava.—Yes.

President.—This bounty of Rs. 3 a cwt. to sugar factories, you don't mean to apply to khandsari sugar?

Mr. Srivastava.—It will be impossible to apply it to them, because administrative difficulties will be very great.

President.—Of course you realise that the khandsaris may have a reasonable complaint against this scheme. They may say 'you are giving to sugar factories Rs. 3 a cwt. bounty and therefore they are able to undersell our khandsari sugar by Rs. 3 a cwt.'

Mr. Srivastava.—They will say that, but I think it will not be a strong argument against giving the subsidy, because we have to make up our mind that we want to improve the Sugar industry on the most up-to-date and modern lines. We don't want at the same time to kill the khandsari industry altogether. The additional one rupee duty which I have proposed will be a certain amount of assistance to them, but the modern type of sugar factory will get much more assistance and we have to make up our mind definitely that this is the best type of industry that we want to have in India.

President.—The position really is that you consider that the khandsari system is uneconomic?

Mr. Srivastava.—Quite.

President.—You don't want deliberately to do anything to harm the khandsari system, but if it gets in the way of the development of the country, then in your opinion it must take its chance?

Mr. Srivastava.—Yes.

Mr. Rahimtoola.—If I understand it correctly your idea is that by providing a subsidy and thus encouraging the sugar factories you want the khandsaris also to try and put up factories instead of continuing this system which is uneconomical.

Mr. Srivastava.—I have referred to that later on in my note and have said that assistance can be given to khandsaris and *gur* makers, but not of a fiscal type, because the administrative difficulties will be very great. The assistance which they really need is more of the nature of technical advice; introduction of improved machinery for small scale work, helping them in organising on co-operative lines and so on, but if you were to attempt to give a subsidy to them, it will be quite impossible to administer it.

Mr. Rahimtoola.—Then it comes to this, that you don't want to perpetuate the khandsaris?

Mr. Srivastava.—I don't want to perpetuate them and I don't want to kill them outright.

Mr. Rahimtoola.—Your idea is to encourage people to build up factories and not adopt the khandsari system?

Mr. Srivastava.—Quite. I may here mention one more point. It is nothing unusual to give subsidy to one particular section of an industry, because when the British subsidy system was introduced in England there was the keenest opposition to this in the House of Commons from the British refiners. The Sugar Refining industry in England is an old and well established industry. This industry got no subsidy when this Act of 1925 was passed. This subsidy was meant only for home grown beet sugar, and in spite of the refiner's opposition the subsidy system was introduced.

President.—I see that you apparently don't take the modern view that it is desirable for manufacturers from other countries to set up factories in India

behind the tariff wall. For instance, in England or France or America you find that when a heavy duty was put on motor tyres, the result was that the French Michelin Tyres Company established a factory in England where they make their tyres. From that the British derive all the advantage of steady employment for their workmen, money in the country and so on. Generally speaking that is regarded as rather a good thing, but apparently you think that it is not sound. If such factories were established here they would encourage the agriculturist to grow cane, would they not? Is it that you are afraid that they would put up refineries in this country and refine Java sugar here or is that you think that they would put up factories here and make white sugar out of Indian canes?

Mr. Srivastava.—They would more probably be white sugar factories.

President.—You don't think that it is a good thing?

Mr. Srivastava.—I would rather prefer Indian capital.

Mr. Rahimtoola.—As far as I understand even the Fiscal Commission has recommended definitely that provided certain conditions are fulfilled which you have yourself mentioned in your memorandum you should have no hesitation in encouraging outside people to come and build factories in India. That is the modern view. By all means we should encourage people to come and build factories in India. Only they should have rupee capital and there should be a certain proportion of Indians on the Directorate and Indian apprentices should be given a chance of learning the trade.

Mr. Srivastava.—That is my opinion too. Perhaps I have put this sentence in a way which doesn't express exactly what I had in mind. The view that you have mentioned just now is also my view. I have mentioned about the Indian capital and Indian directorate and facilities for Indian apprentices.

President.—Provided the conditions laid down by the Fiscal Commission are observed, then you would have no objection?

Mr. Srivastava.—No.

Mr. Rahimtoola.—I would just like you to tell me something more about the question of licence. In the memorandum you say "Factories seeking assistance under this scheme should be required to take a licence from the Government and that Government should observe that suitable arrangements are made for cane supply and that it will instal machinery and also equipment for laboratory and control work of approved types". What happens to the existing factories?

Mr. Srivastava.—Nothing happens to the existing factories excepting the proviso contained in sub-para (ii) that in the case of the existing factories also compliance should be required regarding the installation of machinery and equipment for laboratory of approved types.

Mr. Rahimtoola.—Should not the existing factories have to satisfy the first condition that they have sufficient supply of canes and that they are not encroaching on the supplies which the other factories have got.

Mr. Srivastava.—It will be very difficult to enforce this, because we can't compel them to remove their factories if they have put them down in wrong localities.

Mr. Rahimtoola.—Is it not unfair to penalise new people and allow the old people to carry on under present conditions?

Mr. Srivastava.—Instances in which these conditions are not satisfied in the case of existing factories are not many. There will probably be two or three factories out of the total number of existing factories which may be encroaching on the cane supplies of others, and it will in my opinion not be wise to compel them to remove their factories or refuse subsidies to them for this reason.

Mr. Rahimtoola.—Is it not your intention that every factory should be licensed?

Mr. Srivastava.—Yes.

Mr. Rahimtoola.—To get the licence the factory has to satisfy the conditions laid down by the Government, has it not?

Mr. Srivastava.—In the case of existing factories even in the British Subsidies Act there were exceptions made. They were not required to fulfil all the conditions.

Mr. Rahimtoola.—Do you think that that system will work satisfactorily in India?

Mr. Srivastava.—It is working very satisfactorily in England. I have visited several factories and studied the system actually in operation there. As a matter of fact this scheme that I have given here appears rather complicated, because I have gone into some detail, but in actual practice it will not be so complicated. It is quite a simple thing. It is really much simpler than the British Subsidy system. They have no difficulty there.

Mr. Rahimtoola.—The system here is that the cultivator is a separate entity from the capitalist

Mr. Srivastava.—So is the case with the beet grower.

President.—But he is a very much more substantial person, better educated, able to look after his own interest and has a bigger area.

Mr. Srivastava.—I don't see how it interferes with the system.

Mr. Rahimtoola.—You say I will have to show to Government that I have adequate supplies of cane which do not interfere with other factories. There may be agricultural lands where cane is grown, but how are Government going to satisfy themselves that the agriculturist will supply the factory with the cane?

Mr. Srivastava.—Supposing I put up a cane crushing factory at Cawnpore. There is no cane grown round about Cawnpore. So obviously the location of my factory is not satisfactory and the Government will be justified in refusing to give me a subsidy. If, on the other hand, I put up my factory say in Meerut where there is a lot of cane being grown and provided I can show that I have entered into agreements for supply of cane or that I am going to give a price for cane which is sufficiently attractive for cane growers and that there is a sufficiently large area of cane round about my factory, that should satisfy.

Mr. Rahimtoola.—Your point of view is that if I get certain signatures from the cultivators that they are able to give me cane, then I should be allowed to put up my factory?

Mr. Srivastava.—That is not my point at all. If I put up a factory in a place round which there is enough cane for say 5 factories like mine or 10 factories like mine, and I can show that at present the cane is being converted into *gur* for which the grower gets a return of 6 annas a maund for cane and that according to the scheme I will be paying 8 annas a maund or 7 annas a maund, it is reasonable to expect that I will get the cane I want.

Mr. Rahimtoola.—That is too elaborate a process for the Government to go into.

Mr. Srivastava.—This is exactly the process which is followed by people who have decided to put up factories.

Mr. Rahimtoola.—It can only be worked by the cultivator coming forward, putting his signature and saying that he is willing to sell the cane at this price to the factory if it is put up. That is the only feasible way.

Mr. Srivastava.—I am afraid it is not done and it can't be done. Even the existing factories, when they make arrangements for cane, get no signatures from the cultivators at all.

Mr. Rahimtoola.—They do it under the contract system

Mr. Srivastava.—They enter into contract with the middlemen and the middlemen have no control over the growers.

Mr. Rahimtoola.—Still he undertakes to give the necessary quantity.

Mr. Srivastava.—If he doesn't supply the necessary quantity the factories can't do anything. If the middleman, the cane contractor as he is called, fails to supply the cane the factories can't do anything and they have got no redress. The way in which the system is managed at present is if I want, say, 10 lakhs of maunds of cane for my factory, I send out my men to have a look round and see how much cane can be had from different villages. I make an estimate that I can get so much cane from this village and so much from that and so on. Instead of dealing with each individual cultivator myself, I appoint contractors and it is the duty of these contractors to go round and canvas for the supply of cane and for their trouble they get a commission of quarter anna per maund or whatever is agreed upon, but there is no assurance.

Mr. Rahimtoola.—That system is already known to us, but I am talking about the licence. How far Government should satisfy themselves before allowing a factory to be put up is a very difficult question. The cultivator is already getting 6 annas by turning his cane into *gur*. To find out that he is willing to sell his cane to the factory at 8 annas, that the factory is undertaking to pay 8 annas, and that there are enough supplies of cane is a difficult process. You say "It may reasonably be urged that such a wasteful industry (refining industry) does not need assistance". You consider that refining is a wasteful process, but you don't want that it should be closed and your idea is that we should encourage them by their taking *gur*—or raw sugar as they call it—rather than imported sugar.

Mr. Srivastava.—You mean imported raw sugar?

Mr. Rahimtoola.—Yes.

President.—They would utilise *gur* for refining instead of imported sugar?

Mr. Srivastava.—There is very little imported raw sugar coming into India.

President.—A good deal of it came to Lucknow last year.

Mr. Srivastava.—That is about the only instance in which an appreciable quantity of raw sugar came into the country.

President.—Your idea is that they should use *gur*?

Mr. Srivastava.—Yes.

President.—As regards these proposals that you make for giving assistance to the sugar industry generally and particularly the agricultural side of it, your first proposal is that out of the proceeds of the protective duty on imported sugar funds should be provided for improving the cultivation of cane and production of *gur* and sugar. It implies the earmarking of receipts from a particular industry for that industry. We need not go into that question because it is really a financial question. The point is that if a protective duty is imposed, adequate funds should be provided for improving the cultivation of cane and production of *gur* and sugar. That is your point, is it not?

Mr. Srivastava.—Yes.

President.—What methods do you propose for improving the cultivation of cane and the production of *gur* and sugar?

Mr. Srivastava.—I have mentioned some methods.

President.—The following paragraphs are explanatory then?

Mr. Srivastava.—Yes.

President.—You say that a suitable number of farms should be started either wholly at Government expense or by subsidising farms maintained by sugar factories or private persons. Your idea is that these farms should try out various kinds of cane produced at Coimbatore under local conditions?

Mr. Srivastava.—They should really be farms for distributing seeds of varieties which have already been proved to be successful. A few of these farms may also be utilised for trying out new varieties because such farms will need better staff.

President.—You would try out these varieties in Government agricultural farms?

Mr. Srivastava.—Yes.

President.—After that you would constitute seed farms?

Mr. Srivastava.—Yes.

President.—Would you grow short crops for sets in such farm,—I mean six months crops?

Mr. Srivastava.—That is a detail that I would not like to say anything very definite about. We may try that also. It will be better; it will be economical.

President.—Then, these farms will be in charge of some agricultural officer?

Mr. Srivastava.—Yes, they will be.

President.—They would distribute seeds, demonstrate to the cultivators the use of manure and modern methods of tillage?

Mr. Srivastava.—Yes.

President.—What is your idea of demonstration? Would it be at the farm concerned?

Mr. Srivastava.—At the farm itself.

President.—These farms would really be additional agricultural farms specialising entirely on cane?

Mr. Srivastava.—It will come to that.

President.—Would you also have demonstrators—people to go round and instruct the cultivators?

Mr. Srivastava.—I would like to do it through co-operative societies. It would be easier to do it through co-operative societies than individual cultivators. Of course, in cases in which there are big planters or big zamindars who have large areas under cane it may be possible to do it for them. But if we were to try and give instruction to every small cultivator it will become very difficult.

President.—You would not increase the agricultural staff on that account for demonstration?

Mr. Srivastava.—It will mean an increase in staff but not to the extent to which it will be necessary if we are to give instruction to every small cultivator.

President.—Have you formed any sort of estimate as to what the cost would be of these farms? How many farms would you have in each province?

Mr. Srivastava.—I am afraid I am not so much concerned with the agricultural side of the question as to be able to give a definite opinion.

President.—We have been trying to get something definite from the Imperial Council of Agricultural Research, but we have not been able to get it.

Mr. Srivastava.—I am more on the technological side.

President.—So that you cannot help us in that matter?

Mr. Srivastava.—I am afraid not.

Mr. Rahimtoola.—Can you not give us even an approximate idea?

Mr. Srivastava.—Not off-hand.

Mr. Rahimtoola.—You have made various suggestions which you think are required to give assistance to the indigenous industry. But you cannot give us any idea as to what the cost will be?

Mr. Srivastava.—I cannot give you off-hand. If you wish, I can submit detailed proposals later on.

Mr. Rahimtoola.—The Board would very much like to have them if you don't mind the trouble.

Mr. Srivastava.—I shall send you the information later.

President.—You say that experiments should be conducted for bringing out an improved type of cane crushing mill suitable for the cane growers' needs. Could you give us a more detailed description of the direction in which the present mills can be improved?

Mr. Srivastava.—I have here a copy of the report on the experiments I conducted last year.

President.—Are these bullock mills or power mills?

Mr. Srivastava.—They are of both kinds—bullock mills and power mills. The conclusion which I came to as a result of those experiments was that for small capacities the bullock type of mill, whether driven by bullock or mechanical power, is more efficient and cheaper also, but where one wants to crush more cane say one ton per hour or more then it is advisable to have mills with horizontal rollers. Another suggestion which I had thought of was

President.—Your improvement in the crushing mills would be for small power mills?

Mr. Srivastava.—Yes, but as regards bullock mills there are already good mills on the market. The only difficulty there is in getting strong enough bullocks. The mills are all right. There was one other important point which came out, and that was this. Even the smallest power driven mill is much more expensive in respect of initial cost than the bullock mill and is outside the resources of the average cane cultivator. So I devised a mill mounted on a trolley—a portable cane crushing plant which could be taken from village to village and which may be run on co-operative lines or which may be owned by one man who can go round crushing cane and charging for crushing only. I have ordered one such mill from Europe. That is included in the plant for the experimental factory in connection with the Technological Institute.

President.—You were making some final alterations in this mill?

Mr. Srivastava.—I had made those alterations and the drawing was prepared. But the difficulty was to get the mills made in India. I tried to get them made in Cawnpore by two or three firms, but I could not get satisfactory machines from them. So, I have included one in the plant for the Technological Institute Experimental factory.

President.—You say that when improved types of cane mills and juice boiling plants have been designed and made, they should be sold to the ryots at a reduced price. What is it that you contemplate? Do you think that Government should, having discovered the improved type, start a factory?

Mr. Srivastava.—We can buy them through the Stores Department for instance. If a standard design is prepared, we can have contracts for the supply of such machines.

President.—Your idea is that your Department should invent the machine, then it should be standardised and then Government should place orders for so many hundred thousand machines?

Mr. Srivastava.—Government will not place any orders. The Stores Department will enter into contracts for the supply of these by approved firms and these machines can be tested like other stores by Government Inspectors before they are supplied.

President.—You say that they should be sold to the ryots at reduced prices?

Mr. Srivastava.—This would be a form of Government assistance.

President.—What is the idea? Are the Government to buy them in the first instance and then resell them to the ryots?

Mr. Srivastava.—Supposing a mill costs Rs. 200, it may be supplied for Rs. 150. The balance of Rs. 50 may be paid by Government and may be regarded as a sort of subsidy to the *gur* making industry. I do not know how the financial rules will fit into this.

President.—Nor do I.

Mr. Srivastava.—I must confess I do not know that.

Mr. Rahimtoola.—It means that in the first instance Government should buy it, then sell it at a lower price and afterwards take this difference of Rs 50 out of the money allocated for giving assistance to the industry.

Mr. Srivastava.—That will be one way of doing it.

President.—That is what it comes to.

Mr. Srivastava.—Not necessarily. I would not say that that is the only way of doing it. Another way would be like this. These contractors would supply mills to people who want to buy them and who place the order through the Stores Department and submit their bill for a certain proportion of the price to the buyer and the balance to Government. It does not mean that the Government have to buy the whole thing and then resell.

Mr. Rahimtoola.—Unless you set aside a certain sum, out of which this difference is paid, you cannot go on asking Government to pay the difference from the general revenues. What the President wants to know is this. What will be the amount which Government should set aside to give assistance to the indigenous industry to carry out all the suggestions you have made? You say that you would be able to supply that information later on.

Mr. Srivastava.—It will have to be very, very approximate. It is almost impossible to get statistics regarding the number of cane mills.

President.—Do you contemplate that these mills should be procured and sold by the Provincial Agricultural Departments or what?

Mr. Srivastava.—It is the same difficulty we had in connection with the working of the subsidy. I really do not know which Government Department will have to work this.

President.—As regards this question of devising machinery for making *gur* on a factory scale, I understood that the question was not how to devise the machinery because *gur* can be manufactured even now but that it was difficult to manufacture it with a particular flavour.

Mr. Srivastava.—That is the main thing. We can turn out raw sugar, but not *gur*.

President.—Because you cannot get the exact flavour.

Mr. Srivastava.—I would not say that it is impossible to do it. It needs a certain amount of research work. I think that it should be possible to produce *gur* on a factory scale.

President.—Do you think that it would be possible?

Mr. Srivastava.—Yes.

Mr. Rahimtoola.—Can you give us your opinion about the Hadi process?

Mr. Srivastava.—The Hadi process has not been a success so far.

President.—Has it been tried out this year?

Mr. Srivastava.—The experiments have not yet been made. They are going to be made soon. When I go back from here I have to go to Bilari where the process is going to be tried out. It has not been a success for the simple reason that Mr. Hadi attempts to make sugar by this process, not *gur*. As long as he tries to do that, he will find it difficult to produce sugar at rates which will be even remotely comparable with those in up to date factories.

President.—Does he not make *gur* from the second massecuite?

Mr. Srivastava.—He makes either second sugar or *gur* from that. He has two alternatives.

Mr. Rahimtoola.—How would you compare this system with the khand-sari system? Is it better than the khand-sari system?

Mr. Srivastava.—It is the same system practically.

Mr. Rahimtoola.—We have been told that it is an improvement on that.

President.—The Khan Bahadur claims a large improvement, doesn't he?

Mr. Srivastava.—It is very nominal.

President.—He gives a recovery of about 7 or 8 per cent.

Mr. Srivastava.—Yes, with cane having a sucrose content of 12 or 13 per cent.

President.—He does not make that quite clear. In order to get a proper idea, you must compare it with a factory efficiency of 11 per cent.

Mr. Srivastava.—You should compare not the efficiency in actual percentage of sugar recovery but the efficiency on the total sucrose in cane.

President.—Taking Belapur for instance the Bombay cane has a sucrose content of roughly between 13 and 14 and Belapur has obtained an extraction $10\frac{1}{2}$ and should get 11 per cent. cane. That will be with more or less the same cane as Khan Bahadur Hadi was crushing in Bhopal, so that his 7 or 8 per cent. should be compared with 11 really to bring out the comparison?

Mr. Srivastava.—That is right.

Mr. S. N. CHELLAPPA IYER.

**Oral Evidence of Mr. S. N. CHELLAPPA IYER recorded at
Coimbatore on the 29th June, 1930.**

President.—You are a wholesale dealer in lump jaggery?

Mr. Iyer.—Yes.

President.—How long have you been doing business here?

Mr. Iyer.—80 to 85 years.

President.—You must be well aware of the prices of lump jaggery in the market for the last 20 years

Mr. Iyer.—Yes.

President.—Do you deal in imported white sugar?

Mr. Iyer.—No.

President.—You simply deal in jaggery?

Mr. Iyer.—Yes.

President.—Do you purchase it from the villages?

Mr. Iyer.—Yes.

President.—Do you make an advance to the cane cultivators?

Mr. Iyer.—Yes.

President.—On condition that they sell jaggery to you?

Mr. Iyer.—Yes.

President.—To what parts of India do you send your jaggery?

Mr. Iyer.—To the Nizam's State and Bombay Presidency.

President.—What is it used for?

Mr. Iyer.—It is eaten there; along with tamarind they use this jaggery.

Dr. Matthai.—What is the idea of that?

Mr. Iyer.—In all their dishes they use this. I have been in the Nizam's Dominions and I have myself eaten their dishes.

President.—When you purchase jaggery from the cultivators, do you make your contracts at the time of purchase or at the time you make your advance?

Mr. Iyer.—Sometimes before the harvest at the time of giving advance. At other times I purchase straightaway. If it is a small quantity, I go and purchase it outright.

President.—Do you find the rates of jaggery varying from year to year?

Mr. Iyer.—It has been varying considerably.

President.—What is the present price?

Mr. Iyer.—Rs. 18 per pothi of 800 lbs.

President.—That is for lump jaggery?

Mr. Iyer.—Yes.

President.—In the last 10 years, what is the highest price?

Mr. Iyer.—It was Rs. 75 to Rs. 80 about 14 or 15 years ago. In 1914 it fetched Rs. 80. In 1923, it was Rs. 21.

President.—That is the highest price during the last 8 years?

Mr. Iyer.—I can give you prices for five years.

Year.	Price.
	Rs.
1925	25
1926	17
1927	15
1928	23
1929	22

President.—In 1927, the price was very low.

Mr. Iyer.—Yes

President.—What was the reason for that?

Mr. Iyer.—There was a lot of sugarcane crop under cultivation in this place. The demand from the north also was less.

President.—Was there a good outturn of cane?

Mr. Iyer.—There was a lot of area under cane, the season was good and the demand from the north was less. These three factors were responsible for that; and the outturn also was good.

President.—The price was low because the crop was good and the area was large?

Mr. Iyer.—Yes.

President.—At present then the price is Rs. 18.

Mr. Iyer.—Yes, because there is no demand from the north now.

President.—Why is it so low now? You say that last year it was Rs. 22.

Mr. Iyer.—The price at which I am able to sell lump jaggery depends partly on the price of the cube jaggery and partly on the amount of supply which the Nizam's Dominions and portions of the Bombay Presidency are able to get from elsewhere such as the Punjab, Northern Circars (Madras Presidency) and Sangli and Kholapur in the Bombay Presidency where there is a sugarcane tract.

President.—Is the price seasonal?

Mr. Iyer.—Yes.

President.—The price which is now low may go up?

Mr. Iyer.—I expect the price to go up.

President.—What was the price last year at this time?

Mr. Iyer.—It was Rs. 24.

President.—It is lower this year?

Mr. Iyer.—Yes.

Dr. Matthai.—Your point is that for the three months, July to September, there is no part of India where jaggery could be had except Coimbatore. Therefore during that period it is very likely that the demand will come to you in Coimbatore from various parts of India.

Mr. Iyer.—Yes. Fresh jaggery can be had. But stock on hand is available elsewhere too.

President.—How is it that Coimbatore can supply during those months?

Mr. Iyer.—There are three seasons here in which we crush canes, viz—

Place.	Months.
North Coimbatore	January, February, March.
Udumalpet and Singanellur . .	July to October.
Immediately round about Coimbatore	April and May.

So, jaggery can be had here from July to December.

Dr. Matthai.—The prices that you have given, are they average prices for the year?

Mr. Iyer.—Yes.

President.—We may conclude from what you say that so far as the price of lump jaggery is concerned here it depends in the main on the acreage and the output of the crop all over India?

Mr. Iyer.—That is right.

President.—So that for the lump jaggery you might say that there is almost an All-India market but for the cube jaggery it is a local market?

Mr. Iyer.—That is right.

President.—To what extent do you think that the price of jaggery depends on the price of imported sugar or do you think that it does not depend at all on that?

Mr. Iyer.—There is a relationship between the price of imported Java sugar and lump jaggery.

President.—If the price of imported Java is less than the price of lump jaggery, do you consider that it would replace lump jaggery?

Mr. Iyer.—It will mostly.

President.—If both are sold at the same price?

Mr. Iyer.—If the price is the same, people will prefer the lump jaggery, but if the price of Java sugar is less, they will prefer the Java sugar.

President.—So the price of Java has an effect only when the Java sugar definitely falls below the price of jaggery.

Mr. Iyer.—That is right.

Dr. Matthai.—You don't sell any jaggery locally?

Mr. Iyer.—No. My business is confined to selling jaggery outside Coimbatore to such places as the Nizam's Dominions and Bombay Presidency. I am supplying jaggery to the Distillers in the Madras Presidency as well.

Dr. Matthai.—Can you give us some idea of the extent of your business?

Mr. Iyer.—Rs. 7 or 8 lakhs worth of jaggery per year.

Dr. Matthai.—You are probably one of the biggest dealers in jaggery in Coimbatore.

Mr. Iyer.—Yes.

President.—Or in South India?

Mr. Iyer.—I may be called a big dealer only in Coimbatore.

Dr. Matthai.—You have been doing business on this scale during the last ten years?

Mr. Iyer.—I had more business before, but for the last two or three years I have been doing business in jaggery only to the extent of Rs. 2 or 3 lakhs.

Dr. Matthai.—It dropped from Rs. 8 lakhs to Rs. 2 or 3 lakhs?

Mr. Iyer.—Yes. The quantity of jaggery turned over is the same but in money value it is less because the price is less. In those days the price of jaggery was much higher.

Dr. Matthai.—You have been selling more or less the same quantity of jaggery all these ten years?

Mr. Iyer.—Four years back, I was selling more quantity than now.

Dr. Matthai.—So that the demand for jaggery which you get from Bombay and the Nizam's Dominions is not so large now as it used to be 4 or 5 years ago?

Mr. Iyer.—That is true.

Dr. Matthai.—Along with that there has been a decline also in the price?

Mr. Iyer.—Yes.

Dr. Matthai.—Since there has been, over a period of years, a marked decline both in the demand for jaggery and also in the price of jaggery there must be some reason, apart from seasonal variation, which should account for it.

Mr. Iyer.—The decline in the quantity has been due to a fresh source of supply, namely, the Punjab. Previous to these four years they were not getting any jaggery from the Punjab but now they are getting it. That is why the demand from my customers is not so much as it used to be.

President.—Because the area under sugarcane in the Punjab has been going up?

Mr. Iyer.—Quite so.

Dr. Matthai.—You told the President that the price of imported sugar had some little effect on the price of gur.

Mr. Iyer.—Yes.

Dr. Matthai.—The precise way in which it affected the price of *gur* was this: when the price of white sugar fell below the price of jaggery, people generally preferred the former.

Mr. Iyer.—Yes.

Dr. Matthai.—As far as Coimbatore is concerned, how does the price of white sugar stand in comparison with *gur*? Is the present price of imported Java sugar lower than that of jaggery?

Mr. Iyer.—It is lower than cube jaggery.

Dr. Matthai.—How was it last year at this time?

Mr. Iyer.—Last year also the price of Java sugar was less than that of jaggery. There are two jaggeries. One is cube and the other is lump. In the town only cube jaggery is used.

Dr. Matthai.—If there is an increase in the price of cube jaggery there would also be an increase in the price of lump jaggery?

Mr. Iyer.—Yes.

Dr. Matthai.—Therefore if the price of white sugar falls below the price of cube jaggery and the price of cube jaggery goes down, that must react on the lump jaggery.

Mr. Iyer.—I think that any drop in the price of Java sugar does not always lower the price of cube jaggery.

Dr. Matthai.—Because the people who want cube jaggery will buy it at any price. That is rather different from what you said a little while ago.

Mr. Iyer.—They wouldn't substitute Java sugar for cube jaggery in the Nilgiris and Malabar.

Dr. Matthai.—But speaking about Coimbatore town?

Mr. Iyer.—In Coimbatore town there is more Java sugar sold than cube jaggery. Cube jaggery all goes to Ooty and Malabar.

Dr. Matthai.—I suppose one may generally describe the situation like this, that if you take a town the price of white sugar may have a direct effect on jaggery because if the price of white sugar is lower than that of jaggery people would rather buy white sugar, but so far as the rural areas are concerned apparently there is a fixed demand or preference for jaggery and the decline in the price of white sugar has not perceptibly affected the price of jaggery.

Mr. Iyer.—Even in the villages there is nothing like a fixed demand for jaggery and if the price of white sugar goes down people will buy Java sugar in preference to jaggery.

President.—That is a forecast of the future, is it not?

Mr. Iyer.—I am talking of the sugar that is simply rubbed *gur* and that is cheaper than Java sugar, and therefore people are taking that. If there should come a time when Java sugar became cheaper than *gur* sugar people will take to it.

President.—What is the price of *gur* sugar?

Mr. Iyer.—Rs 22 per pothi of 260 lbs. in Erode.

President.—What is the price of 260 lbs. of Java sugar?

Mr. Iyer.—About Rs. 26.

Dr. Matthai.—What is your impression: when the price of *gur* falls, is there a corresponding reduction in Coimbatore and areas round about in the acreage under cultivation?

Mr. Iyer.—Yes.

President.—You have intimate acquaintance with the raiyats cultivating sugarcane, have you not?

Mr. Iyer.—Yes.

President.—Can you tell us whether any of your clients have varied the acreage under sugarcane very much in the last few years?

Mr. Iyer.—Yes, they have.

President.—Can you give us any definite names?

Mr. Iyer.—Mr. Trivikram Iyer.

President.—How much was he cultivating five years ago?

Mr. Iyer.—40 to 50 acres.

President.—And what is he cultivating now?

Mr. Iyer.—Between 15 and 20 acres.

President.—Was that reduction in any one year or was that a gradual reduction?

Mr. Iyer.—He was gradually decreasing the area during the last five years.

President.—What is the reason for it?

Mr. Iyer.—The price of cube jaggery has dropped.

President.—We find that this year the price of cube jaggery is higher than it was two years before.

Mr. Iyer.—The price of cube jaggery is high only at this particular period of the year.

President.—There has been no substantial decrease in the price of jaggery so Mr. Vellingiri Goundar said.

Mr. Iyer.—I don't know about cube jaggery.

President.—Let us take this lump jaggery: I suppose your friend who holds 40 acres of land turns out lump jaggery too?

Mr. Iyer.—Yes.

President.—The price given by you in your statement is Rs. 21 in 1923, 1929, it was Rs. 22 and in 1928, it was Rs. 28. There does not seem to be very much reason for reducing his area.

Mr. Iyer.—The reduction is due to his getting less yield during these five years and also because of the slight increase in the cost of labour.

President.—Why has he got less yield?

Mr. Iyer.—Owing to scarcity of water.

President.—So that really he has given up cultivation of sugarcane because of unfavourable seasonal conditions?

Mr. Iyer.—Yes.

President.—Has he lost money owing to deterioration in agricultural conditions?

Mr. Iyer.—His pecuniary condition is worse also than what it was before.

President.—Possibly he found difficulty in getting funds for cultivation of sugarcane?

Mr. Iyer.—That might be one of the reasons.

President.—Perhaps your order for jaggery was somewhat smaller from this particular man?

Mr. Iyer.—At present he is not having as much as lump jaggery as he used to have.

President.—You generally place an order perhaps a year before for lump jaggery. It is possible you are not ordering as much jaggery as you used to do before because your business has declined slightly and consequently he is cutting down his area under cultivation. Is that right?

Mr. Iyer.—It is not because of my demand from him being less. There are certain lands from which we can prepare only lump jaggery and there are certain lands from which we can prepare cube jaggery for which we require better type of cane. If the market for cubes is dull and the market for lump is fairly brisk then they manufacture more into lump than cubes.

President.—There is no question of setting aside say 1 acres for lump jaggery and the rest for cube jaggery?

Mr. Iyer.—No. There have been years when the price for lump has been greater than for cubes.

Dr. Matthai.—What was the actual quantity of jaggery that you sent from Coimbatore to Hyderabad and Bombay last year?

Mr. Iyer.—4,000 pothis of 300 lbs. per pothi.

President.—This price that you have given us, are these 300 lbs. per pothi for lump jaggery?

Mr. Iyer.—Yes.

Dr. Matthai.—What was the amount you sent the year before?

Mr. Iyer.—It would be less than 4,000 pothis.

Dr. Matthai.—Five years ago, roughly how much did you send?

Mr. Iyer.—In 1924, I sent about 12,000 pothis.

Dr. Matthai.—The statement shows that there has not been any marked decline in price during these five years but there has been a marked decline in the quantity sent. That is true is it not?

Mr. Iyer.—That is a fact.

Dr. Matthai.—I think probably what has happened is that the price at which you have been selling jaggery during the past few years, say about Rs. 21 to Rs. 23, that is the price which you must get if the business is at all to be reasonably profitable, and therefore if these people in Bombay and the Nizam's Dominions can get jaggery below this price from the Punjab or elsewhere, the demand shifts from Coimbatore to the Punjab.

Mr. Iyer.—That is so.

Dr. Matthai.—Do you think it worth while to send 4,000 or 5,000 pothis from here at a price of, say, Rs. 18 supposing that was the best price you could get?

Mr. Iyer.—If I could purchase it at a lower price, I would send.

Dr. Matthai.—What I am asking is that supposing your clients in Hyderabad offered a price of Rs. 18 per pothi, would it be worth while for you to enter into a contract with them?

Mr. Iyer.—I usually send messages from here as to the prevailing price every day and then they place the order.

Dr. Matthai.—Supposing it happened that from day to day on an average the price that was offered by your clients in Hyderabad reached as low a figure as Rs. 18, under the present circumstances of the jaggery market here, would it be worth while for you to do the business?

Mr. Iyer.—Yes, I can supply according to circumstances.

Dr. Matthai.—What is the lowest price at which you can supply?

Mr. Iyer.—I can supply at 2 per cent. profit.

Dr. Matthai.—You give advance to the cultivator?

Mr. Iyer.—Yes.

Dr. Matthai.—When you ask the cultivator to undertake the cultivation of sugarcane and manufacture jaggery out of it, you have an idea of how much you are in a position to pay the cultivator and the manufacturer of jaggery. Unless the price you are offered from Hyderabad covers what you have got to pay to these people obviously the business would not be worth while.

Mr. Iyer.—If the offer is below Rs. 15, I won't be able to carry on business.

Dr. Matthai.—At Rs. 15 it will be a bad business?

Mr. Iyer.—Yes.

Dr. Matthai.—Supposing the people in Hyderabad had offered to take 10,000 pothis last year at a price of say Rs. 18, would it have been worth while for you to do it?

Mr. Iyer.—I could not have supplied that quantity, because so much was not available in Coimbatore at that price. Before entering into a contract, I form an idea as to the probable quantity available. Last year I sold 4,000 pothis. If they had asked for 10,000 pothis, I would have said that it would not be possible for me to supply.

Dr. Matthai.—What you say is that the decline in your sales during the past five years from 12,000 pothies to 4,000 pothies is almost entirely due to the fact that in the areas over which you have no control sugarcane cultivation has been such that you could not raise this amount of jaggery in Coimbatore.

Mr. Iyer.—The area under sugarcane has contracted. That is the area of the grower with whom I am dealing has contracted. Therefore I could not supply the whole quantity.

Dr. Matthai.—Can you tell us out of the sugarcane jaggery manufactured in the Coimbatore District, approximately how much is consumed in the District and how much is sent outside? This morning Mr. Moosa was here. He was interested in export business to Mangalore. Now you are interested in export business to Sholapur and Hyderabad. Therefore it looks to me that the principal dealers here are dealers interested chiefly in export business and I have formed the general impression that as far as Coimbatore jaggery is concerned, the bulk of it is sent outside.

Mr. Iyer.—Yes. There is not much sale of Coimbatore jaggery within the Coimbatore District. It chiefly goes outside.

President.—Do you do banking business?

Mr. Iyer.—Yes, a certain amount of banking business.

President.—Do you obtain your sugarcane by way of payment in kind for advance made?

Mr. Iyer.—I make a certain advance and when the jaggery is delivered I deduct the amount of this advance and pay the balance.

President.—You take the jaggery in payment of capital *plus* interest. If there is any balance over and above that, you pay it in cash?

Mr. Iyer.—The advance I give to the grower is only a moiety of the probable price of jaggery, I am going to buy from him. For example, if I am going to buy Rs. 400 worth of jaggery, I will advance only Rs. 100. I take the jaggery in payment of capital and interest and if there is any balance I pay it in cash.

Mr. P. KUNHI MOOSA.

**Oral Evidence of Mr. P. KUNHI MOOSA, recorded at Coimbatore
on Sunday, the 29th June, 1930.**

President.—Mr. Moosa, you are a wholesale dealer in jaggery?

Mr. Moosa.—Yes.

President.—You purchase direct from the agriculturists?

Mr. Moosa.—Yes, from the cultivators.

President.—And you sell to whom?

Mr. Moosa.—I supply to the West Coast.

President.—In cubes?

Mr. Moosa.—Yes

President.—You don't purchase lump jaggery at all?

Mr. Moosa.—No.

President.—You have no dealings in jaggery with the distilleries at all?

Mr. Moosa.—No.

President.—Would you mind telling us how you set about purchase?

Mr. Moosa.—We go from village to village to purchase jaggery. We have got brokers who purchase according to my direction. We get orders from the West Coast and we purchase through agents who instruct the brokers to purchase for me.

Dr. Matthai.—You have got your own men working under you?

Mr. Moosa.—We have got four brokers but my main line is commission. I purchase here according to orders received from the West Coast and get 2 per cent. commission.

Dr. Matthai.—You send your brokers round the villages; they buy jaggery from the cultivators and you send all that to Malabar. You are acting simply as commission agent for Malabar?

Mr. Moosa.—Yes.

President.—Who are the people for whom you purchase?

Mr. Moosa.—Different merchants, specially in Mangalore.

President.—They send you instructions to purchase; do they also give you the price or do they give you discretion?

Mr. Moosa.—They give us the market price there but we give them daily quotations of prices at Coimbatore and if they find it profitable they order.

President.—You have definite instructions as to the price at which you are to buy?

Mr. Moosa.—First we give our market rate at Coimbatore.

President.—And then they instruct you whether to buy or not to buy?

Mr. Moosa.—Yes.

Dr. Matthai.—You tell them the prices of jaggery in Coimbatore market from day to day and then you send the jaggery from here and get your 2 per cent. commission on that?

Mr. Moosa.—Yes.

Dr. Matthai.—If the information you send about prices at Coimbatore shows that the prices are high, I suppose the people for whom you are working might write and tell you that if the prices are so high they cannot buy?

Mr. Moosa.—That is right; then they would try to get their supplies from other places. There are certain places which prefer only Coimbatore jaggery.

Dr. Matthai.—That is to say in some places on the West Coast there is a very strong demand for Coimbatore jaggery?

Mr. Moosa.—Yes.

Dr. Matthai.—Supposing the prices were very high, then these people who want Coimbatore jaggery might not buy from you?

Mr. Moosa.—They want only Coimbatore jaggery.

Dr. Matthai.—They will buy it at any price?

Mr. Moosa.—Yes.

Dr. Matthai.—If there is a very big rise in the price of Coimbatore jaggery then will these people who are now in the habit of eating Coimbatore jaggery, still buy it?

Mr. Moosa.—They won't purchase any other stuff but only Coimbatore jaggery.

Dr. Matthai.—But if the price is high they will buy less?

Mr. Moosa.—Even if the price is too high they will only buy the Coimbatore stuff. Of course it may so happen that a customer ordering 100 bundles might reduce his order to 80.

President.—Have the prices of jaggery in Coimbatore varied very much in recent years? What is the present price?

Mr. Moosa.—Rs 33 to 34 per pothi of 300 lbs. for the best quality and second quality Rs 25 to 28.

President.—What was the highest price that you can remember?

Mr. Moosa.—Last year it was 40; Rs. 40 to 42 about 8 months ago.

President.—How long have you been in the business in Coimbatore?

Mr. Moosa.—I have myself been here for the last 10 or 12 years but my father opened the business in Coimbatore more than 50 years ago.

President.—Taking these 10 years that you have been personally conducting this business what is the highest price that jaggery reached in Coimbatore?

Mr. Moosa.—Rs. 92 I think in 1915 or 1916; it even went up to Rs. 95.

President.—In the last 8 years what is the highest price?

Mr. Moosa.—It ranged between Rs. 30 to Rs. 40

President.—What are the causes of the variation?

Mr. Moosa.—Sometimes it happens that there is a large amount of jaggery in Coimbatore but the Mangalore merchants would buy from Mysore instead of from here. They get plenty of jaggery from Mysore and Travancore and when they get that they won't buy from here. When the Coimbatore price is high they will order fewer bundles. They also get the stuff from Travancore State. But there are some merchants who want only Coimbatore jaggery.

Dr. Matthai.—If you take the period after the war the price of jaggery in Coimbatore has not gone higher than Rs. 42?

Mr. Moosa.—It had gone up to Rs. 43.

President.—And the lowest price?

Mr. Moosa.—Up to Rs 18. Two years back it was Rs. 18 for the 1st quality.

Dr. Matthai.—So that taking these 10 years the prices of jaggery have varied from this lowest price of Rs. 18 to the highest price of Rs. 42.

Mr. Moosa.—Yes.

Dr. Matthai.—You were telling the President that the reason for these changes in price is largely that if in any particular year there is more jaggery available in Mysore and Travancore they will buy less from Coimbatore and more from Mysore and Travancore.

Mr. Moosa.—That is not the case. We can expect fresh stuff in Coimbatore throughout the year. Sometimes it may be difficult to get jaggery

for one or two months and then when there is no stuff here the price will increase

Dr. Matthai.—Therefore this variation that takes place in the price of sugar is a seasonal variation. In a place like Mysore for instance you cannot get jaggery at all times of the year?

Mr. Moosa.—Yes only at fixed times.

Dr. Matthai.—Taking a place like Mysore what is the time of the year when you can get jaggery?

Mr. Moosa.—February to March.

Dr. Matthai.—Therefore in February and March your price here will go down?

Mr. Moosa.—Yes.

Dr. Matthai.—But when jaggery cannot be had in Mysore and Travancore your price will go up?

Mr. Moosa.—Yes.

Dr. Matthai.—Therefore I take it that this change that takes place in prices in Coimbatore (Rs. 42) is largely a seasonal change?

Mr. Moosa.—That is correct.

President.—When did you say the lowest price was, Rs. 18?

Mr. Moosa.—Between February and May.

President.—Then the rest of the year the price was Rs. 40?

Mr. Moosa.—Yes.

President.—Does the price depend on the quality of the crop in any one year? For instance in some areas you get more jaggery turned out from an acre of cane, in another year if the season is unfavourable it may be less. Does the price vary according to the crop at all? Supposing a cultivator has 5 acres of cane and in one year he gets 50 tons and in another year owing to good rain and so on he gets 60 tons or more and proportionately more jaggery. In such a year the supply of jaggery in the Coimbatore area will be greater. When the supply is greater does that affect the price?

Mr. Moosa.—Trade depends on the order and at the same time if there is order for lump jaggery that increases the price.

Dr. Matthai.—The demand for lump jaggery comes very largely from the distilleries?

Mr. Moosa.—I don't know.

Dr. Matthai.—When you try to buy jaggery in the Coimbatore market for your clients on the West Coast, sometimes you find that you have got to pay a higher price for lump jaggery. That may be due to the fact that, somebody who is managing a distillery in the Nilgiris is buying at the same time a large quantity of lump jaggery.

Mr. Moosa.—That is one reason.

Dr. Matthai.—It is true that when in one particular year on account of the rise, say, in the price of paddy people find it more profitable here to grow more paddy and less sugarcane, then the supply of sugarcane is reduced. Therefore in that year the price of *gur* will rise because there is less of sugarcane available for the production of *gur*. Generally sometimes it happens that when there is a reduction in the cultivation of sugarcane and the supply of jaggery and at the same time you get a large demand for lump jaggery from places in Bombay, when that happens the prices go still higher. That is to say, on account of the reduction in the supply of jaggery because less sugarcane is cultivated, the prices go up. At the same time there is increased demand for lump jaggery from Bombay and therefore the increase in the price is much greater.

Mr. Moosa.—That is so.

Dr. Matthai.—But what the President suggested is correct, that if in a particular year there is a reduction in the cultivation of sugarcane that is a circumstance which will help to raise the price of jaggery?

Mr. Moosa.—That is correct.

Dr. Matthai.—What you have told us practically comes to this. If you take the past ten years the variations in the price of jaggery have been due partly to changes in the amount of jaggery available in other places such as Mysore and Travancore. It is also to be explained by the changes in the amount of sugarcane cultivated in Coimbatore and in the demand for lump jaggery which comes occasionally from Northern India.

Mr. Moosa.—Yes.

President.—And partly due to the nature of the season which might give a big outturn of jaggery.

Mr. Moosa.—Yes.

President.—Do you deal in imported sugar at all?

Mr. Moosa.—No.

President.—Can you give us any information as to the relation between the price of imported sugar and *gur*?

Mr. Moosa.—No.

President.—As you know, the price of imported sugar is very low. Do you find that your customers for *gur* take to imported sugar instead?

Mr. Moosa.—As far as business is concerned the orders that I get here for jaggery from the West Coast come from people who would want jaggery at all cost. They would not use white sugar. So that as far as I am concerned I am not aware of any influence which the price of white sugar has on *gur*.

Dr. Matthai.—Although your business is almost entirely with people on the West Coast you have some knowledge of conditions generally in Coimbatore?

Mr. Moosa.—Yes.

Dr. Matthai.—It is probably true that people in Malabar and Mangalore who give you orders for jaggery are people who will eat nothing but jaggery. Is that also true about people in Coimbatore?

Mr. Moosa.—No. They will take sugar if that is cheaper, there are very few people here who will only buy jaggery.

Dr. Matthai.—There are a large number of people here who will buy white sugar or jaggery according as the price is high or low?

Mr. Moosa.—That is so. People in Coimbatore, as far as my knowledge goes, would buy white sugar rather than *gur* if it can be had cheaper.

Dr. Matthai.—If the price of white sugar is lower in Coimbatore and a large number of people buy white sugar rather than *gur*, then the price at which you can get your *gur* will be lower?

Mr. Moosa.—It is true that if you take the town of Coimbatore a considerable number of people would buy white sugar rather than *gur* if the price of white sugar is low. But then the demand for white sugar or *gur* in Coimbatore itself is not the decisive factor in the price of white sugar or *gur* generally in these areas. I am not aware of the habits of the people in regard to this matter outside the town of Coimbatore.

Dr. Matthai.—If jaggery and white sugar commanded the same price per maund would people take white sugar in preference to jaggery in Coimbatore?

Mr. Moosa.—I cannot say because I have not much experience of Coimbatore; I know only of the West Coast side, but so far as I know they will purchase white sugar if the price is the same. That is my opinion.

Dr. Matthai.—Supposing the price of sugar per maund was 4 annas higher than the price of jaggery?

Mr. Moosa.—Then they will purchase jaggery.

Dr. Matthai.—What is the use they make of jaggery in these parts?

Mr. Moosa.—For sweets and they use it in the coffee in the interior.

Dr. Matthai.—But it is generally in the preparation of sweetmeats that jaggery is used?

Mr. Moosa.—Yes.

Dr. Matthai.—You were telling us that in Mangalore there are certain special uses for jaggery.

Mr. Moosa.—Yes; they think it has medicinal properties and for that they will only purchase jaggery. It is based largely on the requirements of women.

Dr. Matthai.—But as far as you are aware, in a place like Coimbatore people may use white sugar if it can be had cheaper than *gur*?

Mr. Moosa.—That is so.

Dr. Matthai.—You told us of a specially high price that *gur* fetched during the war. You said it was as high as Rs. 92 or even more. What was the reason of that?

Mr. Moosa.—When there was a very great shortage in the imports of white sugar from Java then there was a rise also in the price of *gur* because the rise in the price of imported Java sugar was very high.

Dr. Matthai.—As you know the price of food grains rose very high during the war: it was a special rise, and therefore it paid the cultivator to grow food grains rather than cane unless there were people who were prepared to offer a higher price for cane and therefore the dealer in jaggery had to offer a higher price to induce people to grow sugarcane.

Mr. Moosa.—Yes that might also be the explanation.

Dr. Matthai.—Are you interested in the enquiry the Tariff Board is making? Do you know the questions we are considering now? Are you interested in imported sugar?

Mr. Moosa.—My family was interested in the business till the war and then I stopped importing sugar after about 1915.

Dr. Matthai.—In 1915-16 the price of imported sugar was very high, then why did you stop it?

Mr. Moosa.—We stopped the business during the war because although prices were high there was no certainty about the price and we were afraid of entering into contracts, so that I am not interested in the question mentioned in your terms of reference and I have no suggestions to offer.

Dr. Matthai.—From what part of Coimbatore do you buy your jaggery?

Mr. Moosa.—From all the surrounding villages, practically covering the whole district.

President.—Do you purchase jaggery in any other district?

Mr. Moosa.—Sometimes we purchase from Erode which is also in the Coimbatore district.

Dr. Matthai.—Will you give us some idea of the amount of jaggery that you deal in?

Mr. Moosa.—About 20 to 25 *pothis* daily.

President.—How do you manage during the monsoon?

Mr. Moosa.—In the monsoon season there are no orders from Malabar and even at Rs. 30 there are no buyers.

President.—Do you stop your business during the monsoon?

Mr. Moosa.—We don't stop business. We expect orders in a week or so. Prices are daily going down and the quantity that we buy now is daily being reduced because there is no order from the Malabar coast on account of the monsoon.

President.—Then do people not eat jaggery during the monsoon?

Mr. Moosa.—They will have purchased and kept stocks.

President.—Will it keep all right?

Mr. Moosa.—Yes.

Mr. T. KRISHNASWAMY MUDALIAR.

**Oral Evidence of Mr. T. KRISHNASWAMY MUDALIAR, recorded
at Coimbatore on Sunday, the 29th June, 1930.**

President.—Mr. Mudaliar, you are a dealer in jaggery?

Mr. Mudaliar.—No.

President.—You own a refinery?

Mr. Mudaliar.—Yes, but it is not working.

President.—How many years have you had the refinery?

Mr. Mudaliar.—My father bought it in 1894 from a limited concern.

President.—Has it been brought up to date? Has any alteration been made in the machinery?

Mr. Mudaliar.—Lately I have made some alterations.

President.—You mean mainly in the refining portion of the machinery?

Mr. Mudaliar.—Yes.

President.—You manufactured at one time from cane direct?

Mr. Mudaliar.—One year I tried with cane.

President.—You have crushing rollers?

Mr. Mudaliar.—Yes.

President.—Since when has the refinery been closed?

Mr. Mudaliar.—For the past one year.

President.—From 1894 up to one year ago, it worked regularly?

Mr. Mudaliar.—My father bought it in 1894, worked it for five years and then stopped it.

President.—When did you restart?

Mr. Mudaliar.—I restarted it in 1921.

President.—From 1900 to 1921 it has been lying idle?

Mr. Mudaliar.—Yes.

President.—Were you able to manufacture at a profit since 1921?

Mr. Mudaliar.—One year I got profit. In the other years I was working at a loss.

President.—How do you obtain your jaggery for your mill?

Mr. Mudaliar.—I have got commission agents in Erode side and in Palghat and through them I get it.

President.—What kind of jaggery do you get?

Mr. Mudaliar.—We get lumps.

President.—Is that jaggery ordinarily white lump jaggery?

Mr. Mudaliar.—Yes.

President.—Do you purchase through agents in the villages?

Mr. Mudaliar.—The dealers may buy it from the villages. I don't know how they buy. I get it from the dealers and give them a commission.

President.—You purchase from dealers like Mr. Moosa?

Mr. Mudaliar.—Yes.

President.—Do you purchase from him?

Mr. Mudaliar.—No, because he is dealing in cube jaggery.

President.—So you have no direct knowledge of the jaggery market?

Mr. Mudaliar.—I have some knowledge, otherwise I won't be able to purchase.

President.—I understood you to say that you give commission to your broker and purchase jaggery.

Mr. Mudaliar.—I must also know the market price. When the price of jaggery is low, I order them to purchase.

President.—When is it lower?

Mr. Mudaliar.—I buy two kinds of jaggery, viz., cane jaggery and palmyra jaggery. I buy according to the rate which Parry and Company fixes. Parry and Company and myself are the only large purchasers of palmyra jaggery. I get it from Palghat and Perunddurai. Cane jaggery I buy from local dealers in Coimbatore.

President.—At what time of the year do you find that the jaggery is cheaper?

Mr. Mudaliar.—From January to March I find it cheaper.

President.—You find it cheaper in January, February and March and you store it up?

Mr. Mudaliar.—After the rain stops, the price of jaggery also goes down. Generally the price is like this: when merchants from the Northern side buy most of the stock in Coimbatore and go away, the market goes down.

President.—The product of your mill, is it white crystal sugar?

Mr. Mudaliar.—Yes.

President.—It is sold in competition with Dutch Standard 24?

Mr. Mudaliar.—Yes. The cane jaggery I require only for distillery. For refinery I get only palmyra jaggery. In our distillery I use both the palmyra and cane jaggery. For refinery, cane jaggery doesn't give so much percentage of sugar as the palmyra does.

President.—How does the price of palmyra compare with that of cane jaggery?

Mr. Mudaliar.—At present I bought it at Rs. 22-12-0 a candy of 500 lbs. and cane jaggery at Rs. 37.

President.—So that palmyra jaggery is much cheaper?

Mr. Mudaliar.—Yes.

Dr. Matthai.—Palmyra jaggery is cheaper and it also gives a higher yield. You told us that you use only palmyra jaggery for refining purposes. Now if you take a candy of palmyra jaggery you pay about Rs. 22 or Rs. 23. If you buy a candy of cane jaggery, you have to pay more?

Mr. Mudaliar.—Yes.

Dr. Matthai.—If you took a candy of palmyra jaggery and a candy of cane jaggery, you could get more refined sugar out of one candy of palmyra jaggery than out of one candy of cane jaggery, so that it gives a higher yield of sugar and is also much cheaper.

President.—The reason why you closed your refinery is because of the low price of imported sugar. If we were to increase the duty on imported sugar, that would probably help you. That would mean you would be turning out a considerable quantity of crystal sugar from palmyra jaggery?

Mr. Mudaliar.—Yes.

President.—So far as the factory here is concerned any increase in the duty would help the tapping of palmyra trees rather than the growing of canes?

Mr. Mudaliar.—Certainly.

President.—I take it that what you find a more profitable course other refineries also would find more profitable.

Mr. Mudaliar.—Yes. If a new factory is to be started, they will probably try to extract direct from cane. My mill is an antiquated one and the machinery is not up to date. Besides that I found difficulty in collecting cane for the every day purpose. I require at least 35 tons of cane every day. That means 40 cart loads. The ryots at first promised to bring cane. When the plant was ready, they disappointed me. So I tried to grow cane

and bring it down to my factory, but I was unable to get a full supply to the factory.

President.—You consider that in order to establish sugar refineries working direct from the cane in this District, some sort of arrangement will have to be made by which the ryots would be forced in some way or other to supply the factory with cane. Have you any ideas on the subject? Have you got any suggestions to make on that particular point? It was a matter which was discussed in the Sugar Committee's Report.

Mr. Mudaliar.—I think some arrangement can be made. We must also arrange for the easy transportation of cane to the factory. We must also have a big factory to crush cane and then only it will pay.

President.—What about the ryots supplying you with cane?

Mr. Mudaliar.—The ryots won't supply cane. In Coimbatore the price of jaggery is always fluctuating. They will be rather inclined to keep back their cane.

President.—So that if any one were to start a big factory here, he must have a canefield?

Mr. Mudaliar.—About 500 acres in reserve.

President.—How are they going to get 500 acres?

Mr. Mudaliar.—That means they must invest more capital.

President.—It is not so easy to obtain 500 acres for cultivation. The Land Acquisition Act won't apply. Supposing you have got your capital and you are going to establish a refinery and you have a detailed knowledge of the District, how are you going to set about acquiring the land for cane? Can you think of any area in which it will be possible to establish a factory?

Mr. Mudaliar.—I can't think of any area.

Dr. Matthai.—It will be very difficult to get land in Coimbatore?

Mr. Mudaliar.—Yes, because the price of land is very high. An acre of land suitable for cultivation would cost Rs. 1,000 to Rs. 1,500.

Dr. Matthai.—It would be exceedingly difficult to get such a large acreage as 500 acres and even if you got it, it would be very expensive?

Mr. Mudaliar.—Yes.

President.—For rent alone you would probably have to pay a large amount.

Mr. Mudaliar.—That is why I gave up the idea of working my concern as a factory crushing cane.

President.—You don't think there is any prospect of establishing a factory working directly with canes in this District?

Mr. Mudaliar.—If new land could be bought, there is a prospect, otherwise not.

President.—You have no local knowledge on which we can rely as to whether it would be possible to obtain such a block of area?

Mr. Mudaliar.—No.

President.—How long have you been running this refinery?

Mr. Mudaliar.—For the last six years. For the last one year it is not working. In 1921 and 1922 I worked it. Then I stopped it for two years. From 1924 till the end of 1929, I worked the refinery continuously.

Dr. Matthai.—You closed it in 1928, because you felt that with the low price of Java sugar it was impossible to do business profitably. What was the price of imported sugar in 1928?

Mr. Mudaliar.—It was Rs. 23-4 per bag in January or February and it fell down to Rs. 21-4 per bag of 168 lbs. in December.

Dr. Matthai.—That was the price of imported sugar?

Mr. Mudaliar.—Yes. I fixed my price according to the imported sugar.

Dr. Matthai.—Roughly what price would have enabled you to get a reasonable profit on your business?

Mr. Mudaliar.—I buy my jaggery by candies, i.e., 500 lbs. and I sell my sugar in standard bags of $1\frac{1}{2}$ cwts. If the price I pay for jaggery, that is per candy is equal to that of the sugar sold, I will get a profit.

Dr. Matthai.—Supposing you are able to get for $1\frac{1}{2}$ cwts. of refined sugar a price which is equal to the price of one candy of jaggery, then the business would be profitable for you?

Mr. Mudaliar.—Yes.

Dr. Matthai.—Rs. 22 per bag?

Mr. Mudaliar.—Yes, there is another consideration. It depends on the outturn I get on the refinery. Of course I have got a poor outturn of about 45 per cent.

Dr. Matthai.—What is this 45 per cent?

Mr. Mudaliar.—It is 45 per cent. jaggery. If we get a better outturn, I will get more profit. I made enquiries in one or two factories in the southern side I got the workmen from there. They were getting about 50 per cent. there.

Dr. Matthai.—You told us that if you got for your white sugar a price per $1\frac{1}{2}$ cwt. which is equal to the price of jaggery per candy, your business would be worth while. Can you tell me precisely what price that would be per $1\frac{1}{2}$ cwt. of jaggery? What exactly was the price of jaggery in 1929?

Mr. Mudaliar.—I paid Rs. 22 per candy.

Dr. Matthai.—That would be how much per bag?

Mr. Mudaliar.—Rs. 7-6-0.

Dr. Matthai.—You want a price for your white sugar of Rs. 22?

Mr. Mudaliar.—Yes.

Dr. Matthai.—Roughly Rs. 15 would be your cost above material. You pay about Rs. 7 for your jaggery. You refine that and you want Rs. 22 for your refined product. Therefore Rs. 15 represents your cost above material.

Mr. Mudaliar.—Yes.

Dr. Matthai.—That Rs. 22 will give you a profit?

Mr. Mudaliar.—Yes.

Dr. Matthai.—Excluding profit, your cost above material would be Rs. 14 Rs. 7 that you pay for $1\frac{1}{2}$ cwts. of jaggery represents not merely the cost of the sugarcane, but also the cost of manufacturing jaggery out of sugarcane?

Mr. Mudaliar.—Yes.

Dr. Matthai.—You have some knowledge of the manufacture of jaggery in this part of Madras?

Mr. Mudaliar.—This is palmyra jaggery.

Dr. Matthai.—How is palmyra jaggery made?

Mr. Mudaliar.—It is tapped from palmyra trees.

Dr. Matthai.—You have no idea how much it costs apart from the cost of the juice. You pay the man for tapping and you boil it and get the juice. Have you any idea what the respective costs are for making jaggery?

Mr. Mudaliar.—The dealers were telling me that that is the lowest price they would accept.

Dr. Matthai.—The tapper doesn't make the jaggery?

Mr. Mudaliar.—He himself makes it.

Dr. Matthai.—He adds his own labour and fuel?

Mr. Mudaliar.—Yes. For the last three years I was purchasing at the same price, Rs. 22 and Rs. 22-8-0. If we are to pay the tappers less than

this price, they will leave their profession and go away. Already many appers left that profession and took to other professions.

Dr. Matthai.—When you were selling refined sugar, was your competition mainly with imported sugar or with Parry's?

Mr. Mudaliar.—Mainly with imported.

Dr. Matthai.—You didn't compete with Parry's?

Mr. Mudaliar.—No competition at all.

Dr. Matthai.—They had different markets?

Mr. Mudaliar.—They were in the market also and they fixed their price according to the price of Java sugar.

President.—Their sugar doesn't come up as far as Coimbatore?

Mr. Mudaliar.—They have got a depot. They have got stock even now, but no bags have been sold, because the Java sugar is sold at a lower price.

Dr. Matthai.—There is no difference in the quality of refined sugar that you get out of palmyra jaggery and out of cane jaggery?

Mr. Mudaliar.—Yes, there is a difference.

Dr. Matthai.—Which is better?

Mr. Mudaliar.—Cane sugar looks better, but people say that sugar manufactured out of palmyra jaggery has got more sweetness.

Dr. Matthai.—Is that the general impression?

Mr. Mudaliar.—Yes, because people buy our sugar especially for making sweetmeats.

Dr. Matthai.—You were telling us a little while ago in answer to a question by the President that if you wanted to start a really good sugar factory in Coimbatore, it would be necessary for you to have control over cane cultivation, so that you may be absolutely certain of the necessary supply of raw material. Would that be less if you were dependent on palmyra jaggery only?

Mr. Mudaliar.—I think so.

Dr. Matthai.—If you are simply refining jaggery, then the difficulty of getting raw materials is not so great, because there is *gur* produced all over the country.

Mr. Mudaliar.—It is ready there for our purchase.

Dr. Matthai.—Are you interested in the tariff aspect of the problem we are considering?

Mr. Mudaliar.—Certainly.

Dr. Matthai.—You want a protective duty on sugar?

Mr. Mudaliar.—Yes.

Dr. Matthai.—As you know the present duty is Rs. 6 per cwt. Is that enough? Would you be able to restart your business?

Mr. Mudaliar.—At present it is not enough, because the price was Rs. 19-8-0 per bag before this Rs. 1-8-0 per cwt. was levied.

Dr. Matthai.—That is when the duty was Rs. 4-8-0 per cwt. Now it is Rs. 6.

Mr. Mudaliar.—When the duty was Rs. 4-8-0, the price of sugar per bag was Rs. 19. After the levying of this duty of Rs. 1-8-0 a cwt., there has been an increase of Rs. 2-4-0.

President.—What is the present price?

Mr. Mudaliar.—It is Rs. 20 to-day.

President.—As against Rs. 19?

Mr. Mudaliar.—Yes.

President.—It has gone up by one rupee?

Mr. Mudaliar.—Yes.

President.—Although the duty is approximately increased to Rs. 2-4-0.

Mr. Mudaliar.—Yes, but the price of Java sugar has gone down by Rs. 1-4-0.

Dr. Matthai.—So that really the Java manufacturer has to carry a duty of Rs. 1-4-0?

Mr. Mudaliar.—Yes.

Dr. Matthai.—That is to say Rs. 7-8-0 a cwt?

Mr. Mudaliar.—Yes.

President.—Have you any guarantee that if it is increased by another Rs. 1-8-0, the Java manufacturer would not bear the duty and keep the present price?

Mr. Mudaliar.—I don't think they will. What I hear is that this is the minimum price at which they can send sugar to India.

Dr. Matthai.—You admit that this process of making white sugar out of jaggery is rather a wasteful process?

Mr. Mudaliar.—At present?

Dr. Matthai.—I mean by wasteful process not necessarily it is unprofitable, should be encouraging a very wasteful form of business. in the process.

Mr. Mudaliar.—Certainly.

Dr. Matthai.—Therefore if we fix the duty high enough to make it profitable for refineries of jaggery to be started all over the country, we should be encouraging a very wasteful form of business.

Mr. Mudaliar.—If any new factory is to be opened, it will be a factory manufacturing sugar from cane.

Dr. Matthai.—In that case you would not require a higher duty than the present one?

Mr. Mudaliar.—I cannot say, because I have not worked it out.

President.—You have no doubt that if you were to open a refinery or extend your refinery, there would be a sufficient supply of palmyra jaggery to keep you going?

Mr. Mudaliar.—If no new refinery is opened, I think I would have a steady supply.

President.—Supposing as my colleague was suggesting, the duty was increased by Rs. 1-8-0, the result would be a considerable number of factories refining sugar from jaggery in this part?

Mr. Mudaliar.—I don't think so. I have got a refinery. I can't but work it.

President.—Supposing there are three or four refineries manufacturing from palmyra jaggery, would there be a sufficient supply for all of them?

Mr. Mudaliar.—No.

President.—The supply of palmyra jaggery is limited?

Mr. Mudaliar.—There is the local competition between the purchasers and the price will go up.

President.—Even so far as manufacturing from palmyra jaggery is concerned, some sort of licensing system of factories would be desirable, that is to say, for Coimbatore a law might be passed that no refinery should be started without a license from the Collector.

Mr. Mudaliar.—Nobody will open a refinery, because the profit is not so large and besides they will have to find a market for their by-product molasses. I have got a distillery and I can make use of that.

President.—So that an increased duty is not likely to result in any considerable expansion of refineries?

Mr. Mudaliar.—An increased duty of Rs. 1-8-0 will not result in any considerable expansion of refineries.

President.—Though it may enable you as you have a distillery to reopen yours?

Mr. Mudaliar.—Yes.

Dr. Matthai.—You were listening to the evidence given by Mr. Moosa about the effect of the price of white sugar on the price of *gur*. Do you generally agree with his views? You are fairly familiar with the *gur* market, because you have been buying *gur*. The main point that we tried to raise was whether a change in the price of white sugar had any effect on the price of *gur*. What is your opinion about it? When the price of imported sugar goes down, is it likely that there would also be a fall in the price of jaggery?

Mr. Mudaliar.—Yes, naturally. When the price of sugar was low, the price of jaggery was also low.

President.—Is that correct? The price of sugar is lower now than it has been at any time during the last 10 years? We were just informed that the price of jaggery was lowest two years ago. The price of sugar was higher than it is now. At present the price of jaggery is about Rs. 33. Two years ago it was Rs. 20. It doesn't support your contention about the relative price of sugar and jaggery.

Dr. Matthai.—You have been listening to the evidence of Mr. Moosa. The kind of general conclusion that he seemed to suggest was this that the market for *gur* is rather a restricted market. There are people in Mangalore and a few other places who want *gur* and they get their supplies from Coimbatore. The supply of jaggery available here in relation to the supplies available from Mysore and Travancore is probably the main determining factor and if variations occurred they were really seasonal variations, that is to say during the same year according to supply and demand you have a rise and fall. Now on that suggestion it seemed to me that probably the market for jaggery was of such a localised character that the price of imported sugar, if anything, had only a very remote influence over it.

Mr. Mudaliar.—I don't think so.

Dr. Matthai.—As soon as you hear that the price of Java sugar has gone down, there is a general tendency in the Coimbatore market for the price of jaggery to go down?

Mr. Mudaliar.—I don't think so.

Dr. Matthai.—These two things work independently. There is some kind of reaction, but in the main they work independently?

President.—Is that your view?

Mr. Mudaliar.—Yes. If the price of jaggery goes down, dealers from Northern India come to Coimbatore and purchase jaggery. When the price of jaggery is high in Northern India, they purchase it from Coimbatore.

Dr. Matthai.—That I understand. That has nothing to do with the imported sugar.

Mr. Mudaliar.—If they are taking this jaggery for refining, naturally the price of sugar goes down.

Dr. Matthai.—Unless you have definite data for that statement, I would not attach very much importance to it, because they can purchase plenty of *gur* in Northern India. Why should they come all the way to Coimbatore to buy jaggery?

Mr. Mudaliar.—I don't know.

Dr. Matthai.—Do you do large a distillery business?

Mr. Mudaliar.—I have got to supply two districts.

Dr. Matthai.—What is the total quantity you distil?

Mr. Mudaliar.—400 gallons a day.

Dr. Matthai.—It is quite an appreciable scale that you are working on?

Mr. Mudaliar.—Yes.

Dr. Matthai.—The material that you use is lump jaggery?

Mr. Mudaliar.—Yes.

Dr. Matthai.—Yesterday we had evidence from a witness that to some extent the price of jaggery in Coimbatore depended on the demand from distilleries.

Mr. Mudaliar.—Yes, lump jaggery.

Dr. Matthai.—Do you think the demand that comes from distilleries is a very important factor in the price of jaggery?

Mr. Mudaliar.—I don't think so. There is only one distillery.

Dr. Matthai.—You make arrack. Does the quantity of arrack vary from year to year?

Mr. Mudaliar.—Not much.

President.—How much jaggery do you use in your distillery in a year?

Mr. Mudaliar.—About 3,000 to 4,000 candies.

President.—How many Bengal maunds?

Mr. Mudaliar.—It will be about 24,000 Bengal maunds.

Dr. Matthai.—You use a certain amount of molasses?

Mr. Mudaliar.—Yes. When my factory is working, I use molasses.

Dr. Matthai.—So that you don't think that the demand for lump jaggery that comes from distilleries has any particular influence on the price of jaggery, because the demand is fairly steady.

Mr. Mudaliar.—Yes.

Dr. Matthai.—There is not likely to be any variation in the demand?

Mr. Mudaliar.—I don't think so, because in Coimbatore there is only one distillery. There would be no need for the other jaggery.

Dr. Matthai.—You are not interested at all in sugarcane cultivation?

Mr. Mudaliar.—No.

Dr. Matthai.—And you have no knowledge of that either?

Mr. Mudaliar.—No.

President.—You were saying that merchants come from Northern India at certain seasons to buy jaggery. Perhaps you who have some knowledge of the market can tell us something about it. Have you any knowledge of the merchants coming from Northern India to purchase jaggery?

Mr. Mudaliar.—No.

President.—How many merchants are there who deal in lump jaggery in Coimbatore?

Mr. Mudaliar.—3 or 4 merchants.

President.—They export to Northern India?

Mr. Mudaliar.—Yes.

President.—Do they export to the Bombay market?

Mr. Mudaliar.—I don't know.

President.—Do you know for what purpose lump jaggery is used largely?

Mr. Mudaliar.—No.

President.—You simply know that there are three or four dealers who export that to portions of India north of Coimbatore?

Mr. Mudaliar.—Yes, Gulbarga side.

President.—What do you do with your molasses? How much do you turn out?

Mr. Mudaliar.—Nearly one-third of the quantity I refine.

President.—What do you use it for?

Mr. Mudaliar.—I use it for distilling.

President.—Do you manufacture methylated spirit?

Mr. Mudaliar.—No. Spirit can be made from molasses.

President.—I believe Messrs. Carew and Company do it. You yourself don't manufacture it?

Mr. Mudaliar.—No. I have Government contract to supply arrack to these two districts

Dr. Matthai.—You would not have started this refinery if you had ~~not~~ had the distillery business?

Mr. Mudaliar.—No.

Dr. Matthai.—It is a sort of side show, is it not?

Mr. Mudaliar.—Yes.

SUGAR MERCHANTS' ASSOCIATION.

**Oral Evidence of Messrs. JAGJIWAN UJAMSHI MULJI, SHAIKH
ABDULLAH and JANI GRIJASHANKER PRABASHANKER,
recorded at Bombay on Saturday, the
13th September, 1930.**

President.—All three of you gentlemen represent the Sugar Merchants' Association?

Mr Mulji.—Yes.

President.—How long has your Association been established?

Mr Mulji.—More than 10 years.

President.—Your Association comprises importers of all kinds of sugar?

Mr. Mulji.—Not only importers but importers and merchants. It is mainly an Association of merchants but a few importers are also members of the Association.

Dr. Matthai.—Generally your members don't import direct?

Mr. Mulji.—Our members do import direct. We have got offices in Java.

President.—Do any of your members deal in *gur*?

Mr. Mulji.—Not generally But sometimes we import *gur* from Java.

President.—You mean cup sugar?

Mr. Mulji.—Yes. But up to now there is no import of cup sugar this year

President.—Turning now to your representation, dated 14th July I see that you commence your representation by suggesting certain improvements in the methods of the Tariff Board. You say "It would have been better if along with the communiqué issued from Ootacamund on the 12th June 1930 by the Board, principal firms and bodies interested in and connected with the Sugar trade and industry had been approached directly" and obtained their opinion on this very important matter. Our general procedure is to issue a communiqué giving the facts concerned in the enquiry and ask the parties interested in the enquiry to forward their representations to the Board. You suggest that this should be altered and we should ourselves address the parties interested. Perhaps you would be able to tell us how we are to know the parties interested unless we receive applications?

Mr Mulji.—Our Association is a very well-known association.

President.—Speaking for myself I say that I was unaware of the existence of such a body until you sent in your representation?

Mr. Mulji.—Several times we have sent representations to the Government. We sent representation to the Government of India when the question of railway rates came up and they know our Association very well.

President.—But we don't know it. The Government of India do not write and say the following are interested in Sugar industry.

Mr Mulji.—The Provincial Government would no doubt be aware of the important bodies

President.—These Tariff Board enquiries would be unduly protracted if it were necessary to write to Provincial Governments and ask them to give us the names of the parties interested in each enquiry. How long do you think our enquiry is going to last? Surely the most practical method of dealing with the question is to issue through the Associated Press a communiqué inviting those interested in the enquiry to send in their representations. If people do not send their representation their interest in the enquiry

cannot be very great! The next point in your Association's representation is the question of Java selling its sugar at different prices east and west of Suez. Could you give us more detailed information about that? You say the Trust is selling to countries west of Suez at a price lower by ten to twelve rupees per ton than that charged for India. When did the price tend to be lower?

Mr. Mulji.—Last year. You must be aware that there is a Sugar Trust in Java. Last year the Trust sold about 3 lakhs of tons of sugar with the stipulation that it exported west of Suez then the price was to be from 1 guilder and afterwards $1\frac{1}{2}$ guilders lower than the price in India.

Dr. Matthai.—That is one guilder per 100 kilos?

Mr. Mulji.—One guilder per 100 kilos; that amounts to Rs. 12 to Rs. 18 per ton.

President.—A guilder is about Re. 1-12

Mr. Abdullah.—About that.

Dr. Matthai.—That happened last year?

Mr. Mulji.—Yes, and recently it has happened again.

Dr. Matthai.—Has that been a general practice with the Java Trust?

Mr. Mulji.—This practice came into existence since last year. Java can very well see that they can exploit India in any way they like and they at once take advantage of it.

President.—You say Java can exploit India in any way what exactly do you mean? You mean they can put up prices to any figure they like?

Mr. Mulji.—Not any but a somewhat higher price. I will explain it in this way: In a competitive market India can buy at the cheapest price from wherever it is available. Instead of that India has to buy from Java because there is difference between India and other countries as regards tariffs. Let us take the instance of England. There the duty is the difference between raw sugar and white sugar. Now the market of raw sugar is a market for world competition and in white sugar the competition in India is between Java and the Continent. If there was a tariff like that in England we could have bought our brown or raw sugar at a cheap price and Java could not have taken advantage.

Dr. Matthai.—What you are suggesting really comes to this that if India had a higher tariff than Rs. 6 a cwt. . . .

Mr. Mulji.—I don't mean that.

Dr. Matthai.—What really happens is that in countries west of Suez Java comes into competition with other sugar producing countries. East of Suez Java has a freight advantage as compared with Cuba and the beet sugar producing areas. Therefore the real reason of their charging lower prices west of Suez is that they have got to sell at a lower price in order to counter the freight advantage.

Mr. Mulji.—India is Java's biggest buyer and Java should not charge a higher price there than west of Suez. But Java is taking advantage of the helplessness of India.

President.—Take the case of the Steel industry. I dare say you know that it is almost the universal practice on the Continent, in England and in America and anywhere else to charge in their home market a higher price than for the export market. For instance, if India is buying steel from Germany she will get a quotation probably cheaper than the home price.

Mr. Mulji.—Whatever may be the practice it is exploiting other countries or dumping.

President.—I don't understand this. On the one hand you say that if Java charges a higher price for her sugar that shows that she is exploiting India, on the other hand you say if Germany charges a lower price for steel in India then she is dumping. You claim that in both cases India is being exploited. You surely can't have it both ways?

Mr. Mulji.—We must stop both.

Dr. Matthai—How are you going to prevent Java from doing this?

Mr. Mulji.—In our representation we have said that imports of foreign sugar should be restricted and its process should be carried on so gradually as to enable India to do away with foreign sugar altogether.

Dr. Matthai—How?

Mr. Mulji.—Let us take the average of the last three years and whatever we have imported we must put an end to. Suppose our average import during the last 10 years is 10 lakhs, we must not allow more than 10 lakhs tons for 10 years.

Dr. Matthai.—More than a million tons.

Mr. Mulji.—Yes.

Dr. Matthai.—How would that help you?

Mr. Mulji.—In India or in every country sugar consumption is increasing

President—Let us take this question of price. How would that help you in the matter of price? Java is selling one million tons in India. Why should she take a lower price?

Mr. Mulji.—Any country that wants to sell in India will sell at a competitive price. They know that India will not buy more than one million tons.

Dr. Matthai—As a matter of fact at present Java is able to sell in India about a million tons of sugar at a price which is higher than the price they charge west of Suez. At present we get our requirements of sugar from Java.

Mr. Mulji.—Yes.

Dr. Matthai—That sugar is sold by Java at a price slightly higher than they charge west of Suez.

Mr. Mulji.—That is right.

Dr. Matthai.—If you are going to arrange that Java should send one million tons of sugar to India for the next five years . . .

Mr. Mulji.—All importation in India should be restricted to one million tons for five years.

Dr. Matthai—Do you expect other countries to be able to send sugar to India other than Java? What evidence have you?

Mr. Mulji.—I will explain that. Sugar industry in other countries is not considered for the cost only, but the industry is considered from the national point of view. Let us take the case of Germany. After the war her production was much less. During the last 10 years she doubled the production although her costs were high. What they do is every year they allow some sugar to export only. Looking first of all to the consumption of Germany they decide how much they can allow for export.

Dr. Matthai.—Germany produces beet sugar.

Mr. Mulji.—Yes. I would like to finish my answer. What happens is when the question comes for export, they have to export it within a certain period. Then they sell it off at any price and the country which can buy from the Continent is India. At that time it comes even cheaper. Sugar went from Java to Europe and from Europe sugar came to India. At that time Germany and all the other countries have not allowed anything for export.

President.—You are talking of things which happened 15 years ago.

Mr. Mulji.—I am talking of last year.

President.—How much beet sugar came to India last year?

Mr. Mulji.—50,000 to 60,000.

President.—That is very little compared to Java.

Mr. Mulji.—They can only export at the time when they are allowed to export. The export is restricted there. Export is only allowed when the question of consumption of their country is finally settled.

Dr. Matthai.—The object of your proposal is that Java should be compelled to sell their sugar in India at much cheaper prices than they do?

Mr. Abdullah.—We have no complaint to make against Java. For the encouragement of Indian sugar industry we suggest the restriction of importation. Supposing the requirement of India is 12 lakhs of tons, Java should be allowed to import 10 lakhs, and the other 2 lakhs of tons we may be compelled to produce in India.

Dr. Matthai.—This proposal started first with the statement that Java sold in India at a higher price than in the west of Suez. As a remedy against that it was suggested that there should be a restriction of imports from Java. Therefore I understand that the object of your proposal is to compel Java to sell at a lower price.

Mr. Abdullah.—That is not our object.

Dr. Matthai.—Let me make my point clear. Do you object to Java selling in India at a slightly higher price than in the west of Suez?

Mr. Abdullah.—Yes.

Dr. Matthai.—It is in the interests of the manufacturers of sugar in India that the prices should be higher. The Indian manufacturer of sugar has to sell and make a reasonable profit. Is it your point that Java should be compelled to sell sugar in India at lower prices than it does just now?

Mr. Mulji.—Our point is that Java should sell sugar in India at a competitive price in comparison with all other countries.

Dr. Matthai.—We are here concerned with the protection of the Indian sugar industry. The object of protecting the Indian sugar industry as far as the tariff aspect is concerned is that Java sugar should be sold at a higher price than it does just now. That is the only way you can protect the Indian manufacturers of sugar. I take it that you are against it.

Mr. Mulji.—We are against that because they have been selling at a higher price. They may come to sell at a lower price to-morrow.

President.—On this question of protection what my colleague was asking you was this. Are you against the institution of a higher price for sugar, not only for imported sugar, but also for Indian sugar throughout India. This is the most obvious method in which the Indian industry can be helped.

Mr. Mulji.—That is not the main method.

President.—You are against a higher price for sugar in India?

Mr. Mulji.—I say a reasonable price.

President.—What is a reasonable price?

Mr. Mulji.—Reasonable price means competitive price—world price.

Dr. Multhai.—Would you accept a price as a reasonable price which cannot possibly say that this year 800,000 tons are required and next year you consider that a reasonable price?

Mr. Mulji.—Until our country has to import.

Dr. Matthai.—What you want really is that the buying arrangements in this country should be made in such a way that Java may be compelled to dump into the Indian market.

Mr. Mulji.—Our suggestion is to restrict the import to a certain number of tons. Then all the countries which will have their surplus sugar will come here to sell in India at a certain competitive price and by that I mean whatever our surplus consumption is we will produce here.

President.—You would restrict the import of sugar into India to about one million tons a year.

Mr. Mulji.—Yes.

President.—Owing to the fact that there is tremendous competition partly as a result of the artificial stimulus by other Governments, the price of sugar has fallen very low. Your view is that all these countries will compete for this restricted market and it would be possible to obtain sugar very cheap. The merchants in India will be able to import sugar very cheap, but as the import is restricted and the Indian industry is unable to produce all the sugar that is required it is probable that there would be a large increase in the price at any rate on occasions when demand was intensified. The difference between the cheap price at which sugar would be imported and the high price which would then prevail would be so much profit to sugar importers and dealers.

Mr. Mulji.—My point is this: to consider the restriction of imports, importers, merchants and Government officers should sit together and find out a way in which this system should be worked. It must be a gradual restriction of import.

President.—You say a gradual restriction of import. How is it going to be worked?

Mr. Mulji.—When Government wanted to restrict opium, they gradually did it. They said that only so many chests of opium will be allowed to be exported. Government of India have done it.

Dr. Matthai.—Therefore you want to establish a large organisation which would be partly controlled by Government and that organisation would say from year to year "This year we are going to take so much from Java, so much from Germany and the balance from the rest of India".

Mr. Mulji.—Not in that way.

President.—How can you possibly say what the requirements of any country will be in a given time? In a case like opium where the cultivation is restricted, production is restricted and everything is under the control of Government, it is quite a different matter.

Mr. Mulji.—In the case of opium exporting license was given and those who had the license only can export. I don't say at present licensing should be adopted, but some method should be adopted by which so many tons will be allowed to be imported. It may not be burdensome to the country and it may go on smoothly.

President.—There is no real comparison between opium and sugar. On the one hand opium is rightly or wrongly considered harmful and they want to decrease or abolish the consumption. That is the difficulty.

Mr. Mulji.—Importation of sugar also is harmful in this way that there is a large drain of money from the country.

President.—It is not harmful to eat sugar. It is harmful to eat opium.

Mr. Mulji.—I don't know what should be the method. If the Government has a mind to do, then a method can be found out.

President.—How can it be? After all people must eat sugar. You cannot possibly say that this year 800,000 tons are required and next year 750,000 tons.

Mr. Mulji.—What I mean to say is sugar consumption will increase and whatever increase there will be, will be made by the gradual growth of local industry.

Dr. Matthai.—How exactly would your scheme work? Let us say we have constituted some organisation—some arrangement of license this year. Next year we decide to take about 700,000 tons of sugar from abroad and we say that the rest of the consumption in India, say 300,000 tons should be bought in India. If the Indian sugar industry is to be protected, the amount of sugar that we buy in this country must be bought at a price which will give the Indian manufacturer a reasonable profit.

Mr. Mulji.—Yes.

Dr. Matthai.—Therefore let us say the lowest price at which you can buy Indian sugar is about Rs. 10 a maund. You get Java sugar at Rs. 7 a maund. How exactly are prices going to be adjusted in this country?

Mr. Mulji.—At that time what should be done is that the tariff should be graduated, not like a fixed tariff, but a tariff according to the price.

Dr. Matthai.—It is not a question of tariff. When you buy 300,000 tons of sugar at Rs. 10 and 700,000 tons at Rs. 7, you will sell the whole lot at Rs. 10 and pocket the difference.

Mr. Mulji.—There will be graduated tariff.

President.—We were told by a commercial representative yesterday that this question of graduating or changing tariffs from time to time would be very difficult to work. In the sugar trade forward sales are common and if there is a possibility that the tariff might change constantly the whole of that business becomes disorganised. It seems to us impossible to change the tariff from time to time, without seriously affecting trade. Any system of variable tariffs will be very difficult to work.

Mr. Mulji.—From the past experience of 10 years what we have found is that whatever the duty is for the sake of revenue or protection up to now, does not help the industry at all. Some increase in duty will not help us. We read in the papers that some persons who have appeared here have suggested Rs. 1-8 additional duty. What we say is that an increase in the duty from Rs. 6 to Rs. 7-8 will not help the local industry to thrive.

President.—Would you recommend more?

Mr. Mulji.—If our first suggestion of restricting imports is not acceptable or practicable to Government, then the next thing must be the prohibitive duty.

President.—What would you consider a prohibitive duty?

Mr. Mulji.—200 per cent on white sugar.

President.—That would be about Rs. 12.

Mr. Mulji.—It is 120 per cent. Forward price is Rs. 5-6 per cwt.

President.—What is the selling price?

Mr. Mulji.—As 8 for terminal tax, As. 4 our expenses and Rs. 6 duty making a total of Rs. 6-12.

President.—What is the present market price?

Mr. Mulji.—To-day's price should not be considered. Owing to some small stock the price is As. 4 or As. 8 higher.

President.—You say that the present price is Rs. 12-12 (Rs. 13 minus four annas which is a temporary increase).

Mr. Abdullah.—It should be Rs. 6-12.

President.—It comes to about Rs. 6 a cwt.

Mr. Mulji.—Rs. 6-4 is the present price. In the case of a steamer which is to arrive after 10 days the price is Rs. 6-12, in the case of a steamer which is to arrive after 1½ months the price is Rs. 5-6 and if a steamer arrives after 6 months the price is Rs. 5-6. So we must calculate on Rs. 5-6.

President.—Let us take Rs. 5-6. The present duty is Rs. 6-12. With the present duty, the market price will come to about Rs. 12-2.

Mr. Mulji.—Yes.

President.—In order to protect the Indian industry adequately what should be the market price?

Mr. Mulji.—Rs. 15.

President.—Would you secure that by raising the duty from Rs. 6 to Rs. 9?

Mr. Mulji.—I would raise it to Rs. 10. I think that the price may come down. Looking to the present production I expect the c.i.f. price may be lower.

President.—You want a duty of Rs. 10.

Mr. Abdullah.—We want a prohibitive duty of Rs. 10.

President.—Is Rs. 15 a prohibitive price?

Mr. Mulji.—Our production will increase.

President.—You mean not a prohibitive duty but an adequate duty?

Mr. Mulji.—We are not talking from our business point of view. We are talking from the national point of view. We have also other suggestions to make after the imposition of the adequate duty.

Dr. Matthai.—Let us say the duty is Rs. 10.

Mr. Mulji.—We have not up till now put up a prohibitive duty, and I don't want that.

President.—What you want is a duty like the one which was imposed on matches to the extent of 150 per cent.?

Mr. Mulji.—Yes.

President.—That is really your point. If we are going to impose a duty at all, let us be absolutely certain that it is an adequate duty.

Mr. Mulji.—Yes.

President.—Although the consumer has to pay something for it, the benefit which the Indian producer gets from the duty is sufficient to compensate the country for the burden borne by the consumer. That is your point?

Mr. Mulji.—Yes.

Dr. Matthai.—Your idea is that Rs. 10 is that duty.

Mr. Mulji.—Yes.

Dr. Matthai.—Let us assume that the duty should be Rs. 10. Now what are the conditions?

President.—You said that there would be a further decrease in the price of imported sugar. I understood from Messrs. Ralli Brothers representative that the market opinion was about equally divided. Some people say that it would fall down and some people say that it might stay at the same level.

Mr. Mulji.—This year the production of beet sugar is 12 lakhs of tons more than that of the previous year and whatever surplus beet sugar is produced must be sold somewhere and India is a place where some portion will be sold.

President.—So the opinion of your Association is that the price of sugar is likely to fall?

Mr. Mulji.—Yes. Our opinion is that it would not rise for another 12 months. If it falls it may come down to Rs. 5.

President.—Your opinion is that the price of sugar is not likely to increase for another 12 months but in the meantime it is likely to fall to Rs. 5?

Mr. Mulji.—Yes.

Dr. Matthai.—What are your conditions?

Mr. Mulji.—Whatever duty is imposed, some portion will be considered as revenue duty and the surplus (that is over and above the present (Rs. 6) revenue duty) realised out of the protective or prohibitive duty should be set apart for helping the sugar industry. From that, bounty should be given.

President.—To whom?

Mr. Mulji.—The first thing is that bounty should be given to refined sugar producers. Secondly, a Sugar School should be opened as they have in other countries which produce sugar where sugar chemistry and sugar engineering must be taught. A certain amount should be allotted for this purpose. Then, the farms or farmers must be helped in the way of supplying best seeds or sets free in the first year and at half the price next year. All farmers should be helped to grow sugarcane. Then as regards manure, it should be supplied to new growers for three years at 25 per cent. less than the cost through co-operative societies and to those who are already

growing it should be supplied at cost price and credit facilities provided. Wherever there is canal water there must be some concession given in the water rate. Those who use well water also must be given some help. Further, those who erect new mills should be helped by subscribing for debentures at the lowest rate of interest for a certain number of years and also in the matter of working capital, keeping sufficient margin of safety for rent and other things. These are the points.

Dr. Matthai.—At Rs. 10 per cwt., on an import of 1 million tons, we shall get about Rs. 20 crores a year.

Mr. Mulji—Yes.

Dr. Matthai.—How much do you want to set aside for all these developments?

Mr. Mulji.—The experiment will be for a certain number of years.

President.—You would recommend a duty of Rs. 10 only for two years.

Mr. Mulji.—Yes. But the duty should be again adjusted after two years.

President.—After two years the duty should be altered?

Mr. Mulji.—Yes. At that time the question should again be investigated. A permanent small committee should be constituted for this purpose.

Dr. Matthai.—Would anybody put money into the sugar industry in India if there was a possibility of the duty being varied after two years?

Mr. Mulji.—Yes. From past experience we can say that even with a low duty some mills have been put up.

President.—On the contrary during the last eight years very few mills have been established. Take the Bombay Presidency. Some years ago there were 4 sugar factories. At present there is only one, viz., the Belapur factory.

Mr. Mulji.—That was due to the mislocation of factories. There must be licenses by Government. Further Government should give advice and help in all matters, particularly in the matter of location of factories.

President.—My colleague was suggesting that if you had protection fixed only for two years and if there was a likelihood of the amount of protection being varied every two years, it would be difficult to get people to put their money into this industry.

Mr. Mulji.—With bounty, there would be sufficient inducement for people to invest their money. Further Government would have plenty of money set aside for assisting the industry in various ways.

Dr. Matthai.—Your suggestion is that by levying this duty of Rs. 10 per cwt. for two years Government will be able to raise Rs. 20 crores.

Mr. Mulji.—Say Rs. 15 crores.

Dr. Matthai.—That Rs. 15 crores is to be kept by Government as a fund for the development of the sugar industry. After two years the duty can be reduced by Government from Rs. 10 to say Rs. 5.

Mr. Mulji.—The duty will be altered looking to the circumstances prevailing at the time.

Dr. Matthai.—That is to say after two years the object of the duty will not be to create a fund for the development of sugar but simply to raise revenue.

Mr. Mulji.—It would depend on the circumstances then.

Mr. Abdullah.—By putting the duty so high, we want to stop the importation. We want to establish refineries so that we can also increase our production. The object in suggesting an increased duty is not only to restrict the imports but also to establish refineries with the help of the revenue thus obtained.

Dr. Matthai.—If you had a prohibitive duty for two years, would India be able to supply her requirements at the end of two years?

Mr. Abdullah.—It would depend upon Government.

Dr. Matthai.—Even if Government gave liberal encouragement, could you start a sugar industry on a large enough scale?

Mr. Abdullah.—If Government think it proper, they can keep the duty for some more time. It may not be Rs. 10; it may be somewhat less. Our aim is to have our own refineries in India so that within ten years we may do without foreign sugar.

Dr. Matthai.—By refineries you mean sugar factories producing sugar from sugarcane?

Mr. Mulji.—At present we have not sufficient cane to make refined sugar because we want sufficient *gur* also. For the present just to run the factory we have to go from raw sugar and continue it till the cane industry grows in the country. When we find that the production of sugarcane is sufficiently large, not by acreage but by improved cane and intensive agriculture, we can start producing refined sugar direct from sugarcane. Till that stage is reached, we have to go gradually. We cannot go straight to sugarcane and manufacture sugar from its juice in large quantities.

President.—The evidence we have had so far indicates quite clearly that the main difficulty that sugar factories in India suffer from at present as compared with Java is the high cost of cane. Further partly owing to the conservatism of the cultivators and partly owing to the nature of the industry propagation of new canes over a considerable area is a very slow matter. For instance the Belapur factory have taken seven years to introduce new kinds of cane and our information is that before there can be any real decrease in the cost of cane it would probably take about 10 years. So do you think it would be desirable to give protection for two years only?

Mr. Mulji.—What we have suggested is that after two years the question should be again considered by a permanent Committee. There must be a fixed programme for the sugar industry that within a certain period, say 10 years, India should produce sugar for her own needs. Why I say two years is because if we put a prohibitive duty then when we make sugar to meet all our requirements within such a short time that amount of duty will remain for the development of the industry, but if the duty is put on for ten years it may come to 100 crores which is not required to help cane growing and other developments. Therefore what I recommend is that first help cane growing and then after sometime the question of a prohibitive duty should again come up.

Dr. Matthai.—If you had this prohibitive duty for 10 years and you were able to collect this 100 crores of rupees you might spare some money for the development of other industries.

Mr. Mulji.—That is an all-India question. Our point of view is that there must be a settled programme for stopping imports of sugar within a certain period and for that all steps that are necessary, even a prohibitive duty, we will not mind.

President.—While you are not committed to any particular recommendation as to any particular steps to be taken, you think it would be advisable to lay down a programme in which gradual steps should be taken to encourage the production of cane in India and Indian sugar to such an extent that within a measurable period, say 10 or 15 years, this import of 1 million tons might be replaced by Indian sugar producers?

Mr. Mulji.—Yes. For that we have made two suggestions, prohibitive duty and restriction.

President.—Some of your suggestions seem to me to lay too much stress upon the importance of increasing the acreage under cane. What is really required in India at present, on the information we have had, is increased output of cane per acre.

Mr. Mulji.—Yes, we have sufficient acreage, about 3 million acres.

President.—Your suggestion, for instance, that seeds should be supplied free or manure should be supplied at 25 per cent. less cost to new growers, those are steps to encourage the extension of the area. What you really

want in place of that is that the Imperial Council of Agricultural Research should suggest what kind of cane is suitable for particular soils, how much manure to apply to increase the output of cane and so on rather than to extend the area.

Mr. Mulji.—Our consumption of sugar at present is too low. Our consumption will go on increasing every year and we will require more sugar. Then again why should we not be in a position at a certain time to export? Our consumption of jaggery is about 3 millions; 10 years hence we may require more jaggery.

President.—That is a long way ahead.

Mr. Mulji.—We will require more jaggery, we will require more sugar.

Dr. Motthai.—But raising the sugar production in India from 100,000 tons to a million tons is a heavy enough programme for ten years.

Mr. Mulji.—Last year when Rao Bahadur Venkataraman had been to Java he had delivered a speech in which he said that in India in crushing we were wasting about 25 per cent. of the juice.

President.—Do you mean in manufacturing your jaggery?

Mr. Mulji.—Yes. At present they are wasting 25 per cent. of the juice. If through co-operative societies and by some acts that could be stopped then to-day we can be self-contained.

Dr. Matthai.—We will increase our *gur* production by 25 per cent.

Mr. Mulji.—Yes, we won't require any outside sugar and that can be done by locating areas of cane producing. There co-operative societies should be established and, although it may be very difficult because there are small growers, cane should be bought at a certain price. That is to say when the price of *gur* is, say, Rs. 5, cane should be bought at Rs. 2-3 and if the *gur* price is higher cane should be bought at a higher price, and for crushing, up to date mills should be established in those areas and thus the tremendous waste that is going on now can be stopped. These are our suggestions; how to do it in practice you know better than we do.

President.—I don't quite follow the implication of it. Is it your suggestion that Government should compel cultivators to grow in certain areas a certain amount of cane and that whatever they grow they should sell through co-operative societies?

Mr. Mulji.—What happens now is that the agriculturist buys manure on credit; whatever his requirements he buys on credit. Then he delivers him jaggery. In the same way whatever his requirements he may draw from the co-operative society and in return deliver cane to the society, the price of the cane being fixed in comparison with the price of jaggery.

President.—Supposing he does not sell his crop to the society? Sugar-cane growers are rather peculiar in that way.

Mr. Mulji.—I think people understand their own interest.

President.—Sometimes they prefer to make their own *gur*.

Mr. Mulji.—There may be prejudice for a year or two but as soon as one or two people in a particular village get the benefit of this arrangement everybody will begin to come in.

President.—Some factories have found great difficulty in getting their cane.

Mr. Mulji.—For that a certain amount of propaganda is needed and once the villagers find that it is to their advantage they will come to the co-operative societies.

President.—The suggestion is that within an area of 10 miles . . .

Mr. Mulji.—I don't say 10 miles because the practicability should be considered.

President.—I understand that if you bring your cane by cart from above 10 miles the sucrose dries to some extent?

Mr. Mulji.—In Bihar some mills bring from a distance of 15 to 20 miles.

President.—That is by rail perhaps?

Mr. Mulji.—Yes.

President.—15 miles by bullock cart is about the limit, after that the quality deteriorates. That is the information we have at present; that is what the factories told us. Take for instance the Belapur factory. They told us that if cane is brought from a distance of more than 10 miles when their chemist tests the sucrose content he finds it lower.

Mr. Mulji.—What we suggest is that there must be a differential duty between raw sugar and white sugar. To-day we have a difference of 8 annas only. We want it to be wider so that the sugar refining industry might develop.

President.—It seems to me that the object of your first proposal was to encourage production of sugar in India from Indian cane. If you are going to encourage people to import raw sugar which could be refined in India

Mr. Mulji.—By all this help the cane industry may develop more and more and at a certain period we must have surplus jaggery and if then we had some refineries that jaggery could be converted into sugar.

Dr. Matthai.—You mean refineries using Indian sugar?

Mr. Mulji.—To-day refineries with Indian sugar are not possible but after some time those refineries which will work on foreign raw sugar will work on Indian jaggery.

Dr. Matthai.—But you said just now that in the manufacture of Indian gur 25 per cent. of the juice is wasted. If you are going to encourage the production of sugar from Indian gur you will be encouraging a rather wasteful process of manufacture. Would it not be better therefore to manufacture sugar direct from cane?

Mr. Mulji.—Yes, but it will take some time.

Dr. Matthai.—It is much better to wait for that than to encourage a wasteful process.

Mr. Mulji.—All these means to avoid waste should be taken.

Dr. Matthai.—Summing up your position generally I gather that as far as the Sugar Merchants' Association are concerned they would not object to a higher duty on sugar provided that duty was utilized by Government for rendering adequate assistance to the Indian sugar industry.

Mr. Mulji.—Adequate or prohibitive duty which will be sufficient to encourage the Indian industry.

President.—You have suggested a rate of duty of Rs. 10. It is not your intention to completely stop the imports of foreign sugar?

Mr. Mulji.—This will automatically stop it gradually. If it does not stop in one or two years there will at least be sufficient signs of development.

President.—As my colleague put it to you, one of your suggestions was that the duty should be earmarked for development of the sugar industry, but provided the sugar industry receives adequate encouragement it does not really matter whether the money is earmarked or not?

Mr. Mulji.—It must be earmarked. If not Government will utilize it in any way it likes. That is our experience up to now.

President.—You visualise Government making grants to the Imperial Council of Agricultural Research and the Council making grants to local departments of agriculture. Most of these things you suggest are primarily a charge on the Provincial Government. If you are going to supply oil cake on special terms the expenditure for that will fall on the Bombay Government. What you contemplate is that through the Imperial Council of Agricultural Research the Government of India will make grants to the Provincial Government for these purposes?

Mr. Mulji.—All these things should come from the Central to the Provincial Government proportionately. All these questions will depend upon the

Government whether it is to be considered as a charge on the Central Government and what should go to the Provincial Government and so on.

President.—You mean some sort of financial arrangement between the Central Government and the Provincial Government? I pointed out to you that all these suggestions you make for assistance to the agriculturist are suggestions which must primarily be considered by the Provincial Government because they refer to the Agricultural Department which as you know is a transferred subject; the financial liability for the expenditure incurred is primarily a liability of the Provincial Government. I gather what you contemplate is that some sort of grants should be made by the Central Government—under the present rules those grants could not be made directly to the Provincial Governments—through the Imperial Council of Agricultural Research. Something on those lines is what you contemplate?

Mr. Mulji.—Yes.

President.—You are aware that the Imperial Council of Agricultural Research have taken some steps already in the direction of improvement of sugarcane crops? There was a meeting of the Agricultural Council recently at Poona.

Mr. Mulji.—Yes. I have read that some steps have been taken.

Dr. Matthai.—Do the members of your Association deal in Indian-made sugar?

Mr. Mulji.—No.

Dr. Matthai.—You say: "So far as is known there are no markets in India where Indian sugar manufacturers could compete with foreign manufacturers". There are some markets where Indian sugar factories would have a freight advantage, wouldn't they? That is to say if you take the factories in United Provinces and near Cawnpore, they will have a certain amount of advantage.

Mr. Abdullah.—Yes.

Dr. Matthai.—You have no business dealing in that part of the country?

Mr. Abdullah.—No.

Dr. Matthai.—What about the Belapur factory? Has it got a freight advantage? Take a market like Hyderabad. Would the Belapur factory have any freight advantage compared with the imported sugar?

Mr. Abdullah.—No special advantage.

Dr. Matthai.—What is the railway freight from Belapur to Hyderabad and Bombay to Hyderabad?

Mr. Mulji.—For large interior import centres there are special rates between ports and big consuming interior centres.

Dr. Matthai.—Do you know the actual railway freight on sugar from Bombay to Hyderabad?

Mr. Mulji.—I don't know.

Dr. Matthai.—Do you think that Indian sugar will have any advantage because it is *deshi*?

Mr. Mulji.—Yes.

President.—Do you think that the purchasers will offer more for Indian-made sugar?

Mr. Mulji.—Yes they will offer a little more. There is that sentiment working in certain areas, but in the Bombay Presidency there is no advantage.

Dr. Matthai.—What is the sentiment you are talking about?

Mr. Mulji.—Some people don't know that sugar in Java is not refined by bone. Slowly they are coming to know that in Java no such thing is used.

Dr. Matthai.—Is there any part of the Bombay Presidency where that sentiment prevails?

Mr. Mulji.—In Bombay none. It is only in the United Provinces that there is some sentiment.

Dr. Matthai.—I am speaking of the Bombay Presidency as a whole.

Mr. Mulji.—No.

President.—In answer to question 4 you say: "there is no reason to suppose that foreign producers sell at unremunerative prices and the general belief is that they always keep a big margin of profit". That is almost exactly the opposite of the opinion given by Messrs. Ralli Brothers.

Mr. Abdullah.—The cost of production in this place can be very much lower and they can grow more percentage of sugar as compared with other countries. The more they grow the less cost of production is to them and so they can make profit.

President.—You have seen in the papers the serious position in Cuba and West Indies?

Mr. Abdullah.—In Java certain mills gave 15 to 30 per cent. dividend.

President.—Could you state whether the dividends were made out of profits during the year or out of reserves?

Mr. Mulji.—Those were out of profits even after allowing for depreciation.

President.—Have you seen the balance sheets of the Company?

Mr. Mulji.—I have seen from reports of sugar magazines.

President.—We were not able to ascertain whether these dividends were rendered possible by the fact that the companies have formed very large reserves.

Mr. Mulji.—What we heard is this that many mills have replaced their machinery. After doing all these things they have been able to declare dividends from 15 to 30 per cent.

President.—Out of what?

Mr. Mulji.—Out of profits.

President.—We would be very glad of your assistance to verify that.

Mr. Mulji.—You can get the information from the bulletins published in Pusa.

Dr. Matthai.—We have seen their bulletins.

Mr. Mulji.—Have they not given that information?

Dr. Matthai.—Yes. In one of their papers there was a statement of profits declared by certain Java Companies. That statement doesn't in the least make clear whether the dividends were declared out of the present profit or out of the past reserves.

Mr. Mulji.—They get information direct from Java.

President.—I think we may be able to obtain that information from Pusa.

Mr. Mulji.—Yes.

Dr. Matthai.—Our information is that at present the cost of Java sugar is somewhere about 9 guilders per 100 kilos. If that is so, they are not making any profit.

Mr. Mulji.—To-day's rate is no good. You must take the average rate.

Dr. Matthai.—If you take the cost of 9 guilders per 100 kilos, that is to say their cost *ex-factory* and if you take their expenses from factory to port, freight from Java to Bombay, landing charges, duty and so on, I don't think it is likely that they are making very much profit.

Mr. Mulji.—This year they may not make any profit. Last year probably they did.

President.—Your statement then is not quite as accurate as it might be. You say "the general belief is that they always keep a big margin of profit". We naturally concluded that at present prices the foreign manufacturers were working at a profit. I understand you to mean that you are not certain that at present they are making a profit.

Mr. Mulji.—They can't make a profit from the sales. They sell at a higher price in their own country on account of Government restrictions.

President.—Do you mean in Java?

Mr. Mulji.—For the goods sold in India (after landing certificate is given to V.J.P. in Java) a rebate of half a guilder will be given. They will calculate first of all what is the consumption of each country, Straits Settlements, East Indies, etc. In places which are nearer to Java they will sell at 9 guilders. In India they will sell at half a guilder less. If raw sugar is exported to Japan, a rebate of one guilder will be given.

President.—I don't quite follow who is going to give $\frac{1}{2}$ guilder and one guilder rebate.

Mr. Mulji.—The Java Trust.

President.—To whom?

Mr. Mulji.—To buyers.

President.—That is not going to help the Java manufacturers in getting a better price.

Mr. Mulji.—That is not what I say. To keep the factory at a certain level of average profit or average sales they sell at half a guilder.

President.—That is a common practice in all trades.

Mr. Mulji.—Only by these artificial ways they can keep the industry. this year prices are lowest in record.

President.—The system of rebates is common to most trades.

Mr. Mulji.—All trade practices cannot be said to be sound.

Dr. Matthai.—It is very sound from their point of view.

Mr. Mulji.—If such practices are followed we can say that Java is prepared to sell sugar in India anyhow. So we must now prepare ourselves to meet Java.

President.—To get back to the point which I was at, I don't quite follow from your argument why you think that at present prices manufacturers of sugar have a big margin of profit.

Mr. Mulji.—They have a big margin in this way that by their help they can sell here the surplus product. There is no margin in the price realised here

President.—Your view is that at present prices the margin of profit for sugar manufacturers if there is one is very small?

Mr. Mulji.—Yes, nominal.

Dr. Matthai.—In answer to question 7, you say. "About 500 tons of *gur* had been imported from Java into Bombay in the year 1929. The quality of that *gur* was found inferior and other difficulties also were raised regarding its trade". In the first place what were these other difficulties?

Mr. Mulji.—They didn't like the stuff.

Dr. Matthai.—That is because it was inferior in appearance and in quality?

Mr. Mulji.—When it is boiled you will find some dirty stuff. In Java it is being made by small firms in the country side.

Dr. Matthai.—Was there a lot of difficulty in disposing of it in the market?

Mr. Mulji.—Yes.

Dr. Matthai.—You don't think it is likely to be repeated?

Mr. Mulji.—We could not sell. Once you buy it, you will not come again.

President.—This is what you call cup sugar?

Mr. Mulji.—The same sugar was moulded in another way.

Dr. Matthai.—Do you know whether any of the hard molasses are imported from Java into Bombay?

Mr. Mulji.—They are imported for Nasik distilleries. Last year we did import 4,160 baskets of hard molasses.

Dr. Matthai.—That would be in tons, how much?

Mr. Mulji.—400 tons.

Dr. Matthai.—Originally it was sent to Nasik?

Mr. Mulji.—Yes.

Dr. Matthai.—Is there any use for hard molasses?

Mr. Mulji.—For mixing this with tobacco a large quantity was sent to Gujrat and at Nasik distillery when the price went up to Rs. 84, they could not afford to make liquor out of it, so they changed over to mohwa.

Dr. Matthai.—For the purposes of a distillery, is it better to have liquid molasses or hard molasses?

Mr. Mulji.—They prefer hard molasses.

Dr. Matthai.—Would hard molasses come into competition with *gur*?

Mr. Mulji.—No.

Dr. Matthai.—Taking the tobacco question, *gur* is also used?

Mr. Mulji.—Yes only a very low quality.

Dr. Matthai.—I was thinking of it this way that if *gur* is generally used to be mixed with tobacco and if that can be replaced by hard molasses, to that extent hard molasses can come into competition with inferior *gur*.

Mr. Mulji.—In the Bombay Presidency not even 10 tons a year is used. Even in tobacco they like the best kind of *gur*.

Dr. Matthai.—Do you think generally in the market the price of white sugar has any effect on the price of *gur*?

Mr. Mulji.—No.

Dr. Matthai.—That is to say if the price of white sugar falls, will there be a fall in the price of *gur*?

Mr. Mulji.—In 1924-25 the price of *gur* was higher than the price of sugar in the Bombay Presidency.

Dr. Matthai.—But generally we have been told by several people that changes in the price of sugar are reflected in the price of *gur*.

Mr. Mulji.—No.

Dr. Matthai.—If the price of white sugar falls as it has fallen during the past year, some people may use white sugar rather than *gur*.

Mr. Mulji.—In Kathiawar the price of jaggery imported from Poona side is Rs. 5 per maund. That side maund is half a Bengal maund or 40 lbs. The price of sugar is Rs. 4-6 and still jaggery is consumed to the same amount.

Dr. Matthai.—That is quite true. But my point is that probably a year ago when the price of sugar was Rs. 5 or was Rs. 5-6 per Kathiawar maund, *gur* might have been selling at Rs. 6.

Mr. Mulji.—No, not always.

Dr. Matthai.—The price of *gur* has remained more or less at that level?

Mr. Mulji.—The price of jaggery is not always higher. Only at the end of the season it goes up.

Dr. Matthai.—Your impression as a merchant dealing in sugar is that the price of white sugar has no direct effect on the price of *gur*?

Mr. Mulji.—That is so.

President.—If the price of imported sugar went very high as it did during the war, would that have an effect on *gur* prices?

Mr. Mulji.—If the refineries buy jaggery at a higher price, then only it would affect. Prices are practically affected by supply and demand.

Dr. Matthai.—In answer to question 6 you say: "Inferior Java is used in manufacturing *gur* and bura sugar and sugarcandy". Is a great deal of inferior Java *gur* used for this purpose?

Mr. Abdullah.—8,000 bags were converted.

Dr. Matthai.—What do you call inferior Java in terms of Dutch Standard?

Mr. Abdullah.—Below 23.

Dr. Matthai.—And above 16?

Mr. Abdullah.—From 16 to 22.

Dr. Matthai.—Is that kind of sugar used in the manufacture of *gur*?

Mr. Abdullah.—Yes.

Dr. Matthai.—What is bura sugar?

Mr. Mulji.—Crushed sugar. Java sugar is boiled and crushed by crushers.

Dr. Matthai.—Do they make bura sugar after making sugarcandy?

Mr. Mulji.—Real bura sugar is Java sugar taken, boiled and crushed, but now recently by the ordinary process of grinding Java sugar.

Dr. Matthai.—Then it becomes slightly better in appearance and finer?

Mr. Mulji.—Yes.

President.—After the manufacture of sugarcandy they boil down what is left. Is that bura sugar?

Mr. Abdullah.—That is used for making bura sugar.

Mr. Mulji.—The method of making sugarcandy and bura is quite different. Bura is simply in whatever sugar is put and crushed and there is no other residue, while in sugarcandy there are two sorts of sugarcandy taken and small residue lumps are made just like jaggery or that water is being sold in tins for mixing it with tobacco.

Dr. Matthai.—This inferior Java sugar which is used in the manufacture of *gur*, bura sugar and so on, is it imported by people specially for that purpose?

Mr. Mulji.—No.

Dr. Matthai.—It is not done that way?

Mr. Mulji.—That sort of sugar is going into consumption. Of course it depends on the market.

Mr. Abdullah.—It is also imported for making bura sugar.

Dr. Matthai.—They are the dealers who get specially for that purpose—just a small quantity I suppose?

Mr. Abdullah.—Yes.

Dr. Matthai.—Sugar below 23 Dutch Standard, does that go into direct consumption?

Mr. Abdullah.—Not direct consumption. The military people of course use it, and it may be used in sweetmeats, but not direct consumption.

Dr. Matthai.—If you take Bombay city, sugar below 23 Dutch standard is used almost entirely in the sweetmeat trade?

Mr. Abdullah.—And bura sugar.

Dr. Matthai.—It does not go into direct consumption?

Mr. Abdullah.—No.

President.—You say in your statement that “it is believed that about 40 per cent. of imported sugar is used in the Sweetmeat trade”. Is it used in the manufacture of European confectioneries or in the manufacture of Indian sweetmeats?

Mr. Abdullah.—Indian sweetmeats.

Dr. Matthai.—If you take the price of imported sugar is there any particular season of the year when the prices are lower than in the rest of the year? Take the first half of the year.

Mr. Mulji.—That is our jaggery season.

Dr. Matthai.—At that time when the *gur* goes on the market, is it likely that the price of imported sugar will come down?

Mr. Mulji.—No. In India prices are governed by the Java season. Generally speaking prices always remain lower in July, August and September.

Dr. Matthai.—That corresponds to the Java season?

Mr. Mulji.—Yes. Then there is always a slight premium but this year as Java had stock right through, there is no premium and in order to dispose of that stock they are trying to sell even future sugar at a lower price.

Dr. Matthai.—So that does not apply to conditions this year?

Mr. Mulji.—No.

Dr. Matthai.—When does beet sugar arrive?

Mr. Mulji.—Generally beet sugar arrives from December to March.

Dr. Matthai.—When is the beet season?

Mr. Mulji.—In September a little and from October regular.

Dr. Matthai.—So that in a normal year Java prices tend to be lower in India from August to October and then probably there is a tendency for prices to rise afterwards. It is about that time that beet sugar comes in.

Mr. Mulji.—From November to March our prices are governed by the competitive prices of beet sugar. What has happened recently on account of the prices being too low is this. These Continental people are not selling. Up to December or January they wait. Then they say there is a surplus in the country and their Government has allowed exportation. At that time they sell or try to sell at any price.

Dr. Matthai.—Is there any difference in quantity or in appearance between beet sugar and cane sugar?

Mr. Mulji.—Very little. Czecho-Slovakian beet sugar is very good.

President.—In appearance?

Mr. Mulji.—It is even better than Java.

President.—Better than Java 28 D. S.?

Mr. Mulji.—Yes.

Mr. Abdullah.—It is also better in grain.

Mr. Mulji.—In India two things are considered when they speak of quality, viz., grain and appearance. There must be good grains and also the appearance must be good.

Dr. Matthai.—By good grain you mean fineness?

Mr. Abdullah.—No. I mean slightly bigger grains.

President.—Is not sweetness considered at all?

Mr. Mulji.—We think that the sweetness is the same.

Mr. Abdullah.—Beet sugar is slightly less sweet than cane sugar.

Dr. Matthai.—Beet sugar is less sweet than cane sugar?

Mr. Mulji.—That is the general opinion. But big sweetmeat dealers or makers use the same quantity of sugar in both cases.

President.—What about the sweetmeats? Have you compared the merits?

Mr. Mulji.—We don't think that there is any difference.

Dr. Matthai.—The Indian market has no preference for Java sugar as against beet sugar?

Mr. Mulji.—It is only a question of price. Before parting I would like to say that the present duty of Rs. 6 is excessive and there should not be any increase in future for revenue purposes. But if Government sincerely wants to help the industry then a fully protective or say a fully adequate duty should be levied. I will call it a dumping duty.

MESSRS. RALLI BROTHERS.

Oral Evidence of Mr. EVELYN WOOD recorded at Bombay on Thursday, the 11th September, 1930.

President.—Mr. Wood, you represent Messrs. Ralli Bros.?

Mr. Wood.—Yes.

President.—Do you do considerable import trade in sugar?

Mr. Wood.—Yes.

President.—You have a branch located in Java?

Mr. Wood.—No. We have arrangements in Java with certain exporters. We have not actually established ourselves there.

President.—What is the exporting firm with which you have arrangements?

Mr. Wood.—Messrs. MacLaine Sugar Company, Ltd.

President.—Is there any single selling Agency for all the Dutch factories?

Mr. Wood.—No single selling exporter exists. Messrs. MacLaine Sugar Company, Ltd., Messrs. Erdmann & Sielcken and Messrs. Wellenstein Krause are the three big European firms. Then there is Messrs. Kian Gwan, Messrs. Patel, & Messrs. Mitsui Bushan Kaisha. Some of these export not only to India but also to China, and elsewhere.

President.—Is there any single organization by which the Java crop is marketed?

Mr. Wood.—Yes. There is the Java Trust, but it is not an exporting Agency. It is simply a producers' union.

President.—Who sell to the exporters?

Mr. Wood.—Yes, and it consists of almost all the Mills. I think there are only 17 Mills outside the Trust in Java.

Dr. Matthai.—Do you make your arrangements with the Trust or do they treat all of them alike?

Mr. Wood.—They treat all exporters alike.

Dr. Matthai.—I suppose the fact of the matter is that all the exporting firms report the particular requirements of the market and they say "if you place so much order we shall give you a rebate". Is that the position?

Mr. Wood.—In a case like that rebates should be uniform in each area. If the Trust are selling sugar to all exporters for India, say, at 9 guilders a unit of 100 kilo: and at the same time they are selling at 8½ guilders shipments west of Suez nobody in the world can complain. But if they are offering, say, to A at 8½ guilders west of Suez and to B at 9 guilders in India, if A wishes also to buy for India they must also offer to him at 9 guilders for India; and similarly if B wishes to buy west of Suez, he should be offered 8½ guilders. The Trust has not adhered rigidly to this principle.

Dr. Matthai.—That is to say there should be no discrimination between exporters.

President.—Between two exporters catering for the same area?

Mr. Wood.—Exactly.

President.—Your point is that there should be no differentiation?

Mr. Wood.—But in practice there may be. If of course, as in Cuba, there is a single seller, which is actually an union of exporters, then there is no question of that.

Dr. Matthai.—They don't have it now.

Mr. Wood.—It is always going to be dissolved, but is still carrying out its practice as far as I know.

President.—That is the distinction between the selling arrangements in Java and in Cuba?

Mr. Wood.—Yes.

President.—Could you give us any information as to the freights from Java to Calcutta and Bombay?

Mr. Wood.—These have dropped considerably.

President.—What do they work out to now to Bombay from Java?

Mr. Wood.—About 5½ guilders per ton of 1016 kilograms.

Dr. Matthai.—What was the rate before the big reduction came on?

Mr. Wood.—About 18 guilders I think.

Dr. Matthai.—You mean three times as much?

Mr. Wood.—Yes.

President.—When did this reduction take place?

Mr. Wood.—It has taken place step by step in the course of the last 2 years.

President.—When was the drop first started?

Mr. Wood.—More than two years ago.

President.—When was the last reduction made?

Mr. Wood.—About six weeks ago.

President.—They continued cutting. The duty of Re. 1-8 must have been a considerable burden to them?

Mr. Wood.—It has been a burden to the trade because this country is so poor for the purposes of buying.

President.—As regards Calcutta have you any information about the freights?

Mr. Wood.—They are usually a farthing to a penny lower per cwt.

President.—You say that deshi sugar at certain times of the year has a preference over imported sugar?

Mr. Wood.—It has.

President.—Preference of how much per cwt.?

Mr. Wood.—It is so difficult to say. It varies with different markets and also what rates we are offering Java at and whether there is heavy stock of Java and so on.

Dr. Matthai.—It is a preference for a swadeshi article?

Mr. Wood.—Swadeshi has nothing whatever to do with it. I should put it down to individual prejudice. I don't know whether you know that *gur* sugar has a peculiar taste. It appears to be sweeter than ordinary refined sugar.

Dr. Matthai.—Has it anything to do with the superstition that bone char is used?

Mr. Wood.—I think scarcely.

President.—Actually most of the Dutch firms use the sulphitation process.

Mr. Wood.—That is my information.

Dr. Matthai.—At present on the Bombay side you would say that the advantage to swadeshi sugar would amount to about a rupee?

Mr. Wood.—I would not put it at as much as that.

Dr. Matthai.—We were told by some Indian manufacturers of sugar that probably on the Bombay side it might be put at about half a rupee per maund.

Mr. Wood.—It is difficult to say. *Gur* sugar never appears in the Bombay market at all.

Dr. Matthai.—I am speaking of white refined sugar produced in India of the kind produced by the Belapur factory.

Mr. Wood.—I have never seen it in the Bombay market yet; it could compete upcountry of course.

President.—That kind of sugar will also have that preference, will it? Because I don't quite see where the question of flavour would come in as far as white sugar is concerned.

Mr. Wood.—I don't think so.

President.—You say "As a matter of interest we would mention that at times during the Daisee season Javas and other foreign sugars are frequently offered at lower rates than the local sugars, but even so it is often found that daisee sugar is preferred by the consumers in this area". What do you mean by Daisee sugar?

Mr. Wood.—Chiefly I mean *gur*.

President.—I thought you were referring to sugar such as Cawnpore sugar and so on.

Mr. Wood.—Cawnpore and other factory sugars would also be considered, but since production of refined sugar in India is very small, one scarcely takes it into account whereas *gur* sugar is something like 2½ million tons or more.

Dr. Matthai.—You don't mean sugar refined out of *gur*, you mean *gur* as such?

Mr. Wood.—Yes. There are of course minor refineries in India to-day and their products are very similar to Java sugar but they all cost a little more. If one is to compare the price of *gur* with the price of the lowest grade brown sugar imported into India, even brown refined sugar is occasionally cheaper than *gur* in the market.

President.—There are times when *gur* is more expensive than crystal sugar but so far as you are aware there is no preference measured in terms of money at any rate for Indian white sugar as compared with foreign sugar?

Mr. Wood.—I don't think so.

Dr. Matthai.—So that I suppose the only kind of advantage that a factory producing refined white sugar, say in the United Provinces, has over imported sugar is simply the freight advantage? If you had a factory working at, say, Cawnpore it would have advantage as regards freight against imported *gur* shipped to Calcutta?

Mr. Wood.—I am just trying to think whether the only advantage is in freight. There is also the advantage as regards bagging: sugar shipped by sea has to be packed in a Java bag which is an expensive bag and costs now about six pence. As a matter of fact Java bags are made in Calcutta so that they have to be shipped to Java to be shipped back again to India.

President.—We might take it that one of the natural advantages the Indian sugar industry has is the provision of cheap gunny bags?

Mr. Wood.—That is so. It is quite a factor because the Java packing costs 3d. a cwt. Possibly the use of lighter bags for Indian sugar would affect the cost of the sugar by 2d. a cwt.

Dr. Matthai.—Then it comes to this that in the first half of the year when the Indian *gur* comes into the market the price of sugar tends to be on the low side and in the second half there is a slight rise?

Mr. Wood.—The price of *gur* being on the lower side does not affect the price of outside sugar. We don't really take it into account at all. As far as I am aware people who use crystal sugar don't use *gur* and people who use *gur* do not use crystal sugar.

Dr. Matthai.—Would you put it so strongly as that?

Mr. Wood.—You take a parallel instance. People who wear dhoties do not wear trousers. You will seldom find a man who wears both.

Dr. Matthai.—You do find in cities like Bombay and Calcutta a considerable number of people who, if the price of *gur* is low enough, will shift their demand from sugar to *gur*.

Mr. Wood.—As far as I know the quantity of *gur* in the cities is negligible, but you probably have better figures than I.

President.—A good deal of imitation *gur* comes in?

Mr. Wood.—Real *gur* is sometimes mixed with brown Java sugar.

President.—The trade returns make no distinction between sugar above 23 D. S. and below 23 but above 16. Their classification is down to 16 D. S. and then from 16 to 8 D. S.

Mr. Wood.—You mean the Customs trade returns?

President.—Yes, and we were wondering whether you could give us any information of the proportion of sugar, say, 23 D. S. and above and between 23 D. S. and 16 D. S.

Mr. Wood.—The vast bulk is over 23 D. S. I should say as much as 85 per cent. or more, possibly 90 per cent. On the other hand on the Calcutta side and more particularly in Southern India there might be as much as 25 per cent. below 23 D. S.

President.—Below 23 and above 16 D. S. is used mainly, I suppose, in the manufacture of imitation *gur* because there is no refining as such in India as far as we know?

Mr. Wood.—Between 16 and 23 D. S. is refined sugar, it doesn't require refining.

Dr. Matthai.—You mean it goes into direct consumption?

Mr. Wood.—Very often. For instance the average D. S. 20/22 sugar which is usually called Browns is in general consumption, and the lower grade D. S. 16/19 average 17 is largely in demand for the army.

Dr. Matthai.—The kind of sugar which is sometimes imported for use in the manufacture of *gur* in India, that would be below 16 D. S.

Mr. Wood.—I very much question whether any sugar is deliberately bought for use in the manufacture of *gur*.

President.—He will buy, say, 500 tons of whatever sugar he can get cheapest and make it into *gur*?

Mr. Wood.—That I think is what happens, and similarly when they know that the *gur* season is coming round, dealers are watching whether there is likely to be a good crop. If it is a poor crop and they think that the price will go up, some of the bigger dealers may on speculation import rather more brown than they would otherwise do: that is below 23 D. S., and similarly they may take a chance and import a certain amount of molasses which really does not ordinarily come into this part of India. They might also take a chance and import a certain amount of Java cup sugar which is practically the same as *gur*; but that is not done deliberately for mixing I think.

President.—What is this raw sugar which you say is sent to England for refining?

Mr. Wood.—It is 96° polarization.

Dr. Matthai.—Is it below 23 D. S.?

Mr. Wood.—D. S. 12 to 14 is the correct figure.

Dr. Matthai.—Do you import this cup sugar at all?

Mr. Wood.—We have. It comes in very small quantities, something like 50 tons at a time, but we had the greatest difficulty in selling it.

President.—Was that of the same kind which has been imported for the last six years?

Mr. Wood.—Yes. But its quality varies every year.

President.—People interested in the manufacture of sugar from *gur* out here represented to us that last year there was an import of cup sugar as

a result of intensive study by the Dutch of the Indian market and it was intended to replace *gur*. Is there anything in that?

Mr. Wood.—I will give you our side of it. We had the greatest difficulty in getting cup sugar because it is not a thing which comes under the purview of the Dutch themselves at all. It is a thing which is produced by the ordinary raiyat in Java.

Dr. Matthai.—Does it correspond to Indian *gur*?

Mr. Wood.—Exactly. As you know, practically all the cane plantations in Java are syndicated. The Mills have contracts with the farmers. They are bound to each other so that practically the whole of Java is laid out in fields which are all syndicated to the Mills, union or non-union. There are odd farmers who are left with a small quantity of cane not taken up by the Mills. From this they produce this cup sugar.

Dr. Matthai.—So that neither the union nor the non-union Mills are manufacturing this cup sugar?

Mr. Wood.—No. It appears in the Java market occasionally, when one of the Chinese or other small dealers produces a sample. Under 80,000 tons were exported last year, of which India took less than 2,000. Of this our share was 50 tons.

President.—That you had great difficulty in getting rid of?

Mr. Wood.—Yes.

President.—Is this your first experiment in that line?

Mr. Wood.—I don't really remember. We might have done it many years ago.

President.—You have not found it very successful?

Mr. Wood.—No. Our point was to test any possible demand; and we found it very difficult to sell at all. We hoped it was going to be used for distillation.

Dr. Matthai.—You mean like molasses?

Mr. Wood.—Yes. When it arrived here we found that most of the distilleries in this Presidency carried on with mhowra flowers.

Dr. Matthai.—Did you sell it to the dealers?

Mr. Wood.—Yes.

Dr. Matthai.—What is the point of importing cup sugar instead of Java molasses? Is Java molasses cheaper?

Mr. Wood.—Yes; if by Java molasses you mean liquid molasses.

Dr. Matthai.—That is the stuff they actually want for distillation?

Mr. Wood.—Yes. But in order to import liquid molasses you have got to have tank storage, special rolling stock, etc., and therefore you must be able to handle a certain minimum quantity.

President.—By the way is this cup sugar what is known as hard molasses?

Mr. Wood.—No, it is different. It has a similar appearance and I should say would give much the same results on analysis; but of this I have no experience. For molasses you have to have a plant. Hard molasses is not quite the bare residue from refining sugar. It is the residue, but it has to be treated again, whereas cup sugar is simply the crushed cane juice with the impurities and everything in it simply boiled down in a pot—the same as *gur*.

President.—You say imported sugar is used largely in sweetmeat trade. I suppose you could not give us any sort of idea as to the extent of imported sugar. Out of the million tons what proportion is used in sweetmeat trade?

Mr. Wood.—We have never sold to sweetmeat dealers direct. We sell it to large wholesale merchants and they distribute it in the bazaar.

President.—But the sugar which is used for sweetmeats here is subject to previous process of manufacture?

Mr. Wood.—It is simply boiled.

President.—Is there a big industry in this connection?

Mr. Wood.—I think there is. One is never able to separate the figures of refined sugar from those of second boilings.

President.—I suppose the second boiling, would that be done in the sweetmeat factory itself?

Mr. Wood.—It is not, because one wants a special sugar boiler, and it is cheaper to do it in bulk.

President.—Would it be something bigger than the cottage industry?

Mr. Wood.—It must be a pucca industry. I do not know of course, but I think if you look round the so-called sugar factories in the Bombay Presidency, there are quite a good number?

President.—Yes, small ones.

Mr. Wood.—If you can get statistics of those factories, you will find they are not producing sugar from the cane.

President.—They are importing sugar and manufacturing it into seconds?

Mr. Wood.—Yes what is called second boilings or soft.

Dr. Matthai.—What precisely is the meaning of second boiling?

Mr. Wood.—Briefly sugar is made, as you know, from squeezing the juice and refining the juice by boiling it, by adding various substances, and finally by putting the resultant white sugar mass into a hydroextractor and spinning it, actually knocking the water out of it at a certain speed and temperature causing crystallisation. By this process you get a certain size of crystals. If you take that again and put it in a pot and boil it at a certain speed, you get smaller crystals or softs.

President.—Would it not be simpler for the sweetmeat trade to grind it?

Mr. Wood.—I don't know, but I should think it is very expensive.

President.—We saw at Belapur.

Mr. Wood.—They were probably making Castor sugar which is different from softs.

President.—All that is necessary to produce softs is to boil down the sugar and then evaporate it?

Mr. Wood.—Yes, practically.

President.—What is your view as an importer as to the effect of the recent increase of duty on sugar? We would like to get the importers' point of view. Has it restricted your trade at all?

Mr. Wood.—Yes, it has; but since there are so many factors, it is difficult to give the proportion.

President.—General trade depression?

Mr. Wood.—Yes, as you say; and generally also owing to the unrest dealers are afraid to accumulate stocks. They don't know what is going to happen in the way of riot or some such thing. Those are the two main difficulties.

President.—Actually this Re. 1-8-0 duty which was put on in March is being borne by the Java producer mainly?

Mr. Wood.—I should say no. I think it has been borne almost entirely by the consumer here.

President.—The price of course is the same before the duty.

Mr. Wood.—Whatever the duty, I think the Java man is going to get his price. The Indian consumer insists on having Java sugar. Whatever the price is if he really must have it, he must pay the price asked, increased duty and all.

Dr. Matthai.—It is true that the o.i.f. prices have come down considerably.

Mr. Wood.—Yes, that is due to an enormous overproduction in sugar.

Dr. Matthai—From what point of view?

Mr Wood—From the point of view of protecting the home industry.

Dr Matthai.—That is, the duty is fixed so high that it gives sufficient protection?

Mr Wood—The duty is fixed high so as to cover certain grades of sugar.

Dr. Matthai.—The basic thing in their tariff is the duty on 96°.

Mr Wood.—That is so, but there are many other duties in addition to that. There are very high duties on refined sugar.

Dr Matthai.—I should have thought that the real principle of the American Tariff was to fix the duty on 96° in such a way that Cuba sugar could be refined and put on the market more profitably in America?

Mr Wood—That is simply their preferential system. That is the common practice all the world over.

Dr. Matthai.—They have got a preferential system which is a different matter. The duty on raw sugar is such that it is more profitable for the Cuban grower to send raw sugar to America to be refined there.

Mr. Wood.—That is the whole ingenuity of the system.

President—In India there is no refinery?

Mr. Wood.—Very little refining is done.

President.—Is there any particular point in distinguishing between raw sugar and crystal sugar?

Mr. Wood.—Personally I don't think so, as far as India is concerned.

President.—From the point of view of the Indian industry it would be better, whatever duty is determined, to put it on all alike?

Mr. Wood.—Yes.

President.—This cup sugar that you were talking about, if the duty is the same on all grades of sugar, none would be imported.

Mr. Wood.—Quite.

President.—The present system under which you have 25 per cent. duty does not help it in the least?

Mr. Wood.—No.

President.—It would simplify matters from the Customs point of view also.

Mr Wood.—You will forgive my saying so—you have chosen a difficult time to enquire into the sugar industry.

President.—We don't choose our time!

Mr. Wood.—Whoever has chosen, the time chosen is the worst. The sugar trade is one large question throughout the whole world. Now they have estimated—it is I admit very difficult to get the works costs and we may take it that Java is as good as any other—the cost of producing at 9 guilders per 100 kilos. That is the price delivered *ex-Mill*.

Dr. Matthai.—That is about Rs. 5 a cwt.

Mr. Wood.—About 8 shillings 6 pence.

President.—That is their cost?

Mr. Wood.—Yes. We all feel that it is going lower.

President.—You think that it is going lower?

Mr. Wood.—Yes.

Dr. Matthai.—Do you think that the cost is going lower?

Mr. Wood.—The price obtainable is going lower than the cost of production. It looks as if by about January there is going to be a surplus of sugar of something like 2 million tons. The world production of sugar is something like 26 million tons.

President.—There is no reason why it should not go down to half?

Mr. Wood.—There is no reason why the price should not go down, in proportion, considerably lower than it is.

Dr. Matthai.—If the price goes lower than the Java cost it is rather a useful thing, it may induce Java to listen to a reasonable restriction scheme.

Mr. Wood.—It might.

Dr. Matthai.—There is some hope that way.

Mr. Wood.—No restriction is likely to come into being before 1933.

Dr. Matthai.—Why not earlier? Why in 1933?

Mr. Wood.—Because of the rotation of crops and of the syndicate contracts.

President.—Any restriction scheme would be really ineffective until they have got rid of the 2 million tons of surplus sugar?

Mr. Wood.—That is so.

President.—So that you might expect low prices to continue perhaps for five years.

Mr. Wood.—My own feeling is, in any case, two years. I cannot say it is the feeling of my firm where individuals think differently.

President.—Of course one can never forecast in trade; otherwise we can all make money.

Mr. Wood.—Quite so.

President.—You have not in your statement expressed any definite opinion as to whether a protective duty is justified by the facts or not? What is your feeling about this claim for protection?

Mr. Wood.—I feel that protection by itself has been tried in most industries and particularly in the sugar industry. In the first instance it is simply a duty in which case the revenue goes to the Government and nothing else follows. The result is that the consumer always pays. I think that if you combined the protective duty with some form of highly organised subsidy to the industry, then my reply would be in the affirmative. You could even increase the import of sugar in that case.

President.—Let me put it this way. At the same time as the protective duty is imposed, supposing Government undertakes intensive research, propagation of new species of canes more suitable for soils thereby increasing the output of cane per acre?

Mr. Wood.—Then I say yes.

President.—That is the sort of lines on which you would like to go on?

Mr. Wood.—I think that might be definitely helpful in the long run. As I say it has worked in every other country. It has increased the purchasing power of the people of the country. That is the great thing about it.

President.—Do you think that if the industry was adequately protected and at the same time the Imperial Council of Agricultural Research and possibly some of the sugar factories really made intensive efforts to improve the cultivation of sugarcane out here, the result of that would be that the purchasing power of the agriculturists would be increased and that possibly at the same time as the sugar factories out here increased their output, the import of sugar might also be increased?

Mr. Wood.—As you increase the purchasing power of the community at large they want a better product and therefore more is likely to be imported.

President.—I do not know whether you have read our Steel Report. There we gave a certain measure of protection to the Tata Iron and Steel Company.

Mr. Wood.—Yes, with the subsidy.

President.—Of course it was looked upon by the foreign manufacturers with considerable suspicion but actually since the duty was imposed, the output of Tata's has gone up and also the imports have gone up.

Mr. Wood.—That is my own opinion. I do not know whether you have read the Chamber of Commerce's note on that point (shown).

Dr. Matthai.—Is it really the report of their sub-committee?

Mr. Wood.—Yes.

President.—Is there anything confidential about this?

Mr. Wood.—No.

President.—The position of the importers as far as I can understand is that the interests of the importers of sugar and of sugarcane growers and manufacturers of refined sugar are not necessarily opposed to each other?

Mr. Wood.—No. I don't think they are.

President.—If by means of a protective duty and by research it is possible to improve the production of Indian sugarcane and Indian refined sugar, it is likely that the general trade in sugar would be stimulated by the increased purchasing power of the agriculturists?

Mr. Wood.—That is so.

President.—Does that sum up the position of your firm?

Mr. Wood.—I think it does. I would even go further and say this. One would say that the refining in India is not sufficiently advanced to be able to catch up that of the other countries which are highly organised.

President.—Have you seen any of the actual factories?

Mr. Wood.—I have

President.—The cost of producing cane is in many parts of India considerably higher than in Java.

Mr. Wood.—Yes.

President.—The actual manufacture, apart from the cost of the raw material, is in some of the factories fairly efficient.

Mr. Wood.—I believe it is, but on the other hand there is the question of wage cost. The wages are comparatively low here. With the increased purchasing power, the cost of living is likely to go up.

President.—Wages in Java are not very much higher than in India.

Mr. Wood.—I think that the sugar factory wages are higher.

President.—Are they?

Mr. Wood.—I should say 30 or 40 per cent. higher.

President.—You mean the actual labour employed in the factories?

Mr. Wood.—Not the quantity of labour.

President.—Most of the question really comes in with the efficiency and suitability of the machinery adopted and close supervision at each stage?

Mr. Wood.—That is so. It is the skilled operatives that count.

President.—We have been told in Belapur that roughly 91 per cent. of their labour is unskilled labour and the rest is highly skilled labour which must be retained.

Mr. Wood.—Then you must compare the question of wages of the highly skilled people in Java and here. The wages here for an average man in the factory would be between Rs. 800 and 1,000; I mean you will probably have to pay for an expert say Rs. 800 or Rs. 1,000. In Java on the other hand you will probably get an expert for 400 or 450 guilders.

President.—Plus a share in the profits?

Mr. Wood.—Yes.

President.—That comes to a very considerable amount.

Mr. Wood.—I do not know.

President.—That is our information.

Mr. Wood.—Then you will probably have to give the same here too.

President.—That is the custom in the Java trade?

Mr. Wood—It is also the custom in Cuba. It is the custom in most of the sugar countries. I do not know whether it is worth examining, but I do not know that the general wages paid in Java to experts on sugar are supposed to be cheaper than most other countries, certainly cheaper than in India where skilled work is always very highly, and I would even say unduly highly, paid.

President.—Am I correct in thinking that a protective duty would not be opposed so far as your firm is concerned provided they were satisfied that the purchasing power of the agriculturist was thereby increased?

Mr. Wood—That is correct, provided the total duty including the tariff rate and any subsidy, does not exceed the present amount.

President.—That is to say a protective duty alone would not do any good?

Mr. Wood.—It is absolutely useless unless definite measures are taken to improve the purchasing power of the agriculturist.

Dr. Matthai.—All that argument is mainly based on the assumption that a large part of the consumption of sugar in India is by the agriculturist classes, that is to say, supposing we gave protection by means of a high tariff duty and prices went higher than they otherwise might, your suggestion is that the purchasing power of the raiyat is so low that consumption will go down. On the other hand, if instead of the whole protection being given by duty a part of it was given by means of a subsidy for developments, research and things of that kind, that might keep prices somewhat lower than under a high tariff duty and therefore there would be more consumption of sugar in the country.

Mr. Wood—That is the sort of argument one would advance, because industrial population in India is comparatively minute though it is true that its consumption of sugar is very much higher.

Dr. Matthai.—I should have thought that the bulk of the agricultural population consumed sugar in the form of *gur*.

Mr. Wood.—He likes to consume sugar in the form of *gur*, provided it is not expensive but at the same time he consumes large quantities of sweetmeats when he can afford them.

Dr. Matthai.—We are importing 1 million tons of sugar and producing 3 million tons of *gur*.

Mr. Wood—The bulk of the consumption is of *gur*. The Committee has suggested that not only should research go on on the lines of trying to improve the refining of sugar but it should try to improve the actual sugar yield per acre. It is only about a ton in this country as opposed to five tons in Java.

President.—In Bombay they are getting as much as 2½ tons.

Mr. Wood—But even 2½ tons is not much compared with five tons. The second thing is that the methods of producing *gur* might be examined. It is a cottage industry and one can mention other cottage industries which are flourishing. For example we have an industry in the South, the hand-loom industry. If you take the number of industrialists in this country as compared with the number of agriculturists I suppose about 2 per cent. of the population would be the number of industrialists.

Dr. Matthai.—If you try to distinguish the industrialists inhabiting the towns it seems to me quite possible to conceive that the whole of this one million tons of sugar is being consumed by the town population. If that is so, what I am suggesting is this: if we increase the duty on sugar and the price of sugar went up, unless it is assumed that there is going to be a corresponding rise in the price of *gur* the agricultural classes would be hardly affected

Mr. Wood.—I am awfully sorry to be complicated. If the country people are more prosperous the town people who live on the country people by handling their exports and by selling their industrially made products, they similarly are more prosperous and therefore they are able to import more

white sugar. That is really the whole basis of the argument. That is why I personally would favour considerable encouragement to production of *gur* in the country but not to production of white sugar. To encourage refining and neglect *gur* production would actually be economically unsound. I don't think it is really farsighted to try and produce refined sugar to any great extent in this country, but better to try to increase the yield per acre and produce more *gur*.

President.—Then we are up against this problem if where you now produce 20 tons of cane you are going to produce 40 tons in future, what are you going to do with the surplus production of cane?

Mr. Wood.—I am inclined to think that you might sell more *gur*, than is being sold now. I have been told that sweetmeat manufacturers say that they would sooner use *gur* if the price was reasonable enough in default of which they use these softs, and that of course would diminish the imports of softs and at the same time provide an off-take for *gur*. On the other hand, more prosperous times would increase the consumption of white sugar as such.

President.—If what the Agricultural Department say is to be taken as correct as regards a very large increase which is possible in the output of cane, it does seem to me of some importance to preserve the white sugar market to some extent to the Indian manufacturer otherwise how are you going to dispose of your surplus cane?

Mr. Wood.—The alternative is to restrict the cultivation of cane. It is a very complicated problem; what are they going to do with their output?

Dr. Matthai.—These statements of prices that you have given are they wholesale prices?

Mr. Wood.—That is the Bombay market rate for Java white.

Dr. Matthai.—8 shillings for the lowest quality and 9 shillings 5d. for the highest?

Mr. Wood.—That is not the highest quality but the highest price in the month.

Dr. Matthai.—That comes to Rs. 6· that must be c.i.f.?

Mr. Wood.—Yes.

Dr. Matthai.—Where can we get reliable statement of wholesale market prices in the Bombay market?

Mr. Wood.—What would you like this to include?

Dr. Matthai.—Including duty, landing charges and merchants profit.

Mr. Wood.—At the moment it is Rs. 13 per cwt.

Dr. Matthai.—It is rather important for us to have reliable wholesale prices in the Bombay market.

Mr. Wood.—If you give me a list of the dates I can give you the corresponding prices fairly easily.

MR. JAGJIWAN UJAMSHI MULJI.

Oral evidence of Mr. JAGJIWAN UJAMSHI MULJI recorded at Bombay on Monday, the 12th January, 1931.

President.—Mr. Mulji, what exactly is your business?

Mr. Mulji.—My business is sugar.

President.—Are you an importer of sugar?

Mr. Mulji.—I am an importer of sugar; also I have shops for distributing it in the interior at various places.

President.—Do you deal in *gur* at all?

Mr. Mulji.—Yes, sometimes.

Mr. Rahimtoola.—What do you mean by shops? Do you do anything more than the ordinary importing business?

Mr. Mulji.—Yes.

Mr. Rahimtoola.—Does it mean that you buy sugar from factories and have shops for selling it?

Mr. Mulji.—Not in that way. Whatever sugar we buy from factories in Java and import we sell at our shops. We do retail business as well.

Mr. Rahimtoola.—Then you are an importing merchant?

Mr. Mulji.—Yes, I am an importer and a merchant. I am also engaged in distributing it in the whole of India. Our distributing business extends up to Delhi.

Mr. Rahimtoola.—It means that you are doing both wholesale and retail business?

Mr. Mulji.—Yes.

President.—Where are your shops situated—all over India?

Mr. Mulji.—Not all over India, but at certain places, viz., Bombay, Delhi, etc.

President.—Have you any shop at Ahmedabad?

Mr. Mulji.—We have our customers at Ahmedabad. We have customers in the whole of Bombay Presidency, Central India and the Central Provinces. We have some customers also in the Punjab. We send daily reports to them. We keep corresponding with them and send a large amount of sugar to those people.

President.—We understand that you could give us valuable information about the manufacture of banawat *gur*?

Mr. Mulji.—I shall give you all the information that I have. I shall be only too pleased to do so.

President.—How is this imitation *gur* made? Out of what raw material is it made?

Mr. Mulji.—First of all, the imitation *gur* is not made throughout the year.

President.—No.

Mr. Mulji.—It is made only when the rate of Indian *gur* goes up. Generally speaking for about two or three months, in a year this *gur* is made. Further I may say here that it does not mean that every year this imitation *gur* is made. Everything depends upon the rate of Indian *gur*.

President.—You mean, as compared with the rates of imported sugar?

Mr. Mulji.—Not that. If the rate of Indian *gur* goes higher than sugar, then the banawat *gur* is made.

President.—How do they make it?

Mr. Mulji.—That also depends upon the rates of sugar and of *gur*. Generally speaking, those people who are making this *gur* import *gur* from Meerut and its surrounding districts from the United Provinces and mix it with imported sugar. If the rate of sugar is high, then they add less percentage of sugar, but if the rate of sugar is low, then they add more percentage of sugar. But without Meerut *gur* this banawat *gur* is not made.

President.—They mix imported sugar and Meerut *gur*?

Mr. Mulji.—Meerut *gur* or such quality *gur*. In Guzerat, Central India and Berar, people like the kind of *gur* which is produced on the Deccan side.

Mr. Rahimtoola.—Do I understand you to mean that the ingredients are different in the Meerut and Deccan *gur*?

Mr. Mulji.—The Deccan *gur* is much superior.

Mr. Rahimtoola.—In what way?

Mr. Mulji.—It is much superior in the matter of purity, sweetness and refining. In fact, in every way it is much superior. Their crushing is best; their boiling is best; in short the Deccan *gur* is the purest and the best.

Mr. Rahimtoola.—Do I understand that the Meerut *gur* is not used for consumption?

Mr. Mulji.—Meerut *gur* is consumed but not on our side. This side of India wants a better class of *gur*. When the price of this better class of *gur* is high, then the banawat *gur* is made by mixing the Meerut *gur* with the imported sugar and sold in competition with the Deccan *gur*.

President.—Where is it made? Mostly in the Bombay Presidency?

Mr. Mulji.—In almost all parts of Guzerat.

President.—You mean in all the towns?

Mr. Mulji.—Yes.

President.—Would you mention the principal ones?

Mr. Mulji.—Bulsar, Surat, Baroda and Ahmedabad. Ahmedabad is the biggest centre for that. It is also made in Veerangam. Outside Guzerat it is made in Akola, Amraoti, Indore and Ujjain.

President.—What kind of imported sugar do they mix?

Mr. Mulji.—That again depends upon the quality of *gur*. The people's liking is for *gur* with yellowish colour. Meerut *gur* is of yellow colour. If Meerut *gur* is not available and some other *gur* is being used, then they mix it with white sugar and sometimes even brown sugar of high colour—probably between No. 20 and No. 23. Anything below No. 20 is not used because that is reddish in colour. Generally sugar above 20 Dutch standard is used.

President.—Do they make this banawat *gur* out of molasses and imported sugar?

Mr. Mulji.—I had a letter from my Java office in which it was stated that in some places in the Madras Presidency—and near Malabar district—some people were mixing molasses and some inferior jaggery and were selling at the cheapest rate. They also asked me whether I would try that. I have my doubts about the Bulsar factory which is near Bombay. That Bulsar factory is I think using molasses in banawat *gur*. Of course I have not seen the inside working of the factory, but the proprietor is dealing in molasses and in this banawat *gur* also on a large scale. On that side, *gur* is being sold in liquid form. If molasses were to be used, it should be of a special reddish quality. As you know there are two kinds of molasses, *viz.*, red and black. The red quality is a special quality which can only be used in the making of banawat *gur*. Even then, a large percentage of molasses cannot be used.

President.—I understand that there is strong religious objection amongst some people against using imported sugar. Do those people use banawat gur?

Mr. Mulji.—I don't think that any such objection exists.

President.—In some parts of India, it exists very strongly.

Mr. Mulji.—In the United Provinces, it exists to a small extent. They require only to be told for a month or so about the real position, and then all their prejudice will vanish, because in Java sugar no bone charcoal is used and there is absolutely nothing in it.

President.—We were told at Belapur that there was a preference for a *deshi* sugar and sometimes they would pay a little more for *deshi* sugar.

Mr. Mulji.—There are some temples in which only *deshi* sugar is used. In such a case, no matter what the price is, *deshi* sugar will continue to be used.

President.—There are some ceremonies in which I understand they will only use *deshi* gur?

Mr. Mulji.—Yes, *deshi* gur but not sugar. In all ceremonies, gur is used.

President.—Then what about banawat gur? Are they agreeable to use banawat gur?

Mr. Mulji.—Those consumers do not know whether it is a banawat gur or a genuine gur. They understand that it is an inferior gur. Gur is being used mostly by the villagers, and the bulk of the population in India come from the villages. They are also poor. There are all sorts of gur sold at one and the same shop. They are told that one is a better class gur and the other an inferior class gur.

Mr. Rahimtoola.—Without revealing that it is in a way a mixed gur?

Mr. Mulji.—The buyer does not know that. The shopkeeper will only say that one is a better class and the other an inferior class gur. The poor people buy banawat gur because it is cheaper.

President.—The purchaser would prefer to buy Indian gur?

Mr. Rahimtoola.—He buys it under that impression?

Mr. Mulji.—That is not the thing. He has to see what money he has got. If he can spend more, he will buy the better class gur.

President.—Supposing it was labelled foreign gur, would he still buy it?

Mr. Mulji.—I think he would. About this there is no prejudice. Very recently I had a letter from a Cuban Refinery. They have an office in New York also. They wrote to me and enquired whether in India still the religious prejudice existed. I informed them everything. I replied that those were old stories and that no religious bias now existed against sugar on account of the more extended use of Java sugar. In Java sugar, there is no bone charcoal used.

President.—There is a strong political sentiment in favour of Indian sugar?

Mr. Mulji.—It exists of course, but 90 per cent. has gone and the 10 per cent. will go away within ten or twelve months.

President.—What about the Swadeshi movement?

Mr. Mulji.—I have here a pamphlet issued by the Congress asking people to encourage Indian industries and boycott foreign sugar. I also read in some papers that they were going to boycott foreign sugar. As soon as I read it, I wrote an official letter to the President of the Congress stating that to boycott foreign sugar under the present circumstances was impossible because the production in India was only 10 per cent. and for 90 per cent. we had to rely upon imports. By asking people to boycott foreign sugar, the result would be that Java sugar would be sold in another form as Swadeshi sugar. I pointed out everything in very plain words—including the fact that so many factories had been recently started. As soon as they received my

letter, I got a telephone message asking me to see them. When I convinced them, next day they issued a Press Note to all the papers that the Congress was not going to boycott foreign sugar.

President.—To encourage the use of Swadeshi sugar the best method really is to take steps to ensure that the production of Indian sugar is increased?

Mr. Mulji.—I agree.

President.—The best plan from the political point of view would be to take steps to ensure that the production of Indian sugar increased, so that the industry would be able to supply the whole country.

Mr. Mulji.—Quite true.

Mr. Rahimtoola.—The point that you have made out is that the Congress waived their objection simply on the score that Swadeshi sugar was not available in India?

Mr. Mulji.—That is so.

Mr. Rahimtoola.—Therefore the other point is that if steps are taken by Government to make India self-contained as far as sugar is concerned, it will be siding with the political movement in this country

Mr. Mulji.—Quite so. About that, there are no two opinions.

President.—What about the Java *gur* imported as such? Do you know anything about it?

Mr. Mulji.—I know everything. I have my office in Java. We are in correspondence; we are also regularly watching the rates, production and everything.

President.—How much was imported last year?

Mr. Mulji.—Very little.

President.—Do you know what it is like? Have you seen samples?

Mr. Mulji.—I have seen samples. I have imported Java *gur* and lost heavily thereby.

President.—In what way does it differ from Indian *gur*?

Mr. Mulji.—There are two sorts of Java jaggery. One is called Java cup sugar and another Java *goela tumbos* which means jaggery in baskets. First we imported cup sugar. When I imported, the rate of Indian jaggery was about Rs. 3 per cwt. higher than even sugar. The cost of the cup sugar was Rs. 6 per cwt. lower than that of the Indian jaggery. I was at that time in Java. Seeing the rates I purchased at first 200 or 300 tons. I sold the first 100 tons at a very good profit and then I sold 50 tons at slightly reduced rates but yet at a good profit. Then I thought that this business was paying. So, I purchased 2,000 tons, kept them in stock and came here. The rate began to decline a little. I myself found that the Java cup sugar was not pure. It was the small people in Java that made this cup sugar. The Chinese in Java are like Marwaris in India. They buy cup sugar from poor people. If the price goes high, they ask them to mix dust, ashes, sugarcane leaves, etc. So, the product was very inferior. Afterwards I tried my level best to refine it and make jaggery out of that. I took the help of the scientists too. Then, I tried to mix it with Meerut *gur*. I tried my best to refine and do everything with it but it was so dirty and the colour also was so bad that I had to dispose of it at a loss of about Rs. 80,000 in Japan.

President.—What about *goela tumbos*?

Mr. Mulji.—That is of a better quality than cup sugar, but that also is not so good.

President.—How is that made? Is that made in factories?

Mr. Mulji.—No. They are made by small men in the interior. There are rich Chinese—they are what the Marwaris are in India—who collect a large amount of cane and make these, but the whole output in Java of such

goela tumboe for export is not more than 10,000 tons a year. There is some local consumption also.

President.—Is that comparable to Indian *gur*?

Mr. Mulji.—No.

President.—But that is imported here and sold?

Mr. Mulji.—Yes. This year a Bombay man imported this but he lost money on it and has stocked it.

Mr. Rahimtoola.—He does not find an easy market for it here?

Mr. Mulji.—No. It is being sold in Cutch Mandvi where the Indian tariff does not apply.

President.—What about Karachi? We heard that 19,000 bags of imported *gur* went to Karachi?

Mr. Mulji.—That means 1,900 tons. But from Karachi it must have been shipped to Cutch Mandvi. I had heard that there was some enquiry from the Punjab but that was for cup sugar and that must have been imported from Karachi for refining purposes.

President.—That was imported from Calcutta.

Mr. Mulji.—I had learnt afterwards that those who imported this had made no profits!

President.—As a matter of fact they imported hoping that it would be classed below 8 D. S. but the Customs authorities classed it above 8 D. S. and charged accordingly.

Mr. Mulji.—Whatever might be the reason—I have tried everything upon this cup sugar personally—I am quite sure that it is a risky business to rely upon this cup sugar for refining.

President.—Have you any information as to whether any of the big factories in Java have made any experiments in *gur* making?

Mr. Mulji.—None. They will not make any.

President.—Why?

Mr. Mulji.—We enquired from our Java office if there was any chance of the factories there making *gur* and our people wrote to us that there was none because in the factories the overhead charges are the same and this *goela tumboe* has not got a ready market in which they can rely on selling thousands of tons forward. On the other hand they have standardized their white and brown sugar and they can very easily sell lakhs of tons forward. There is no trouble about rejections and so on but in the case of *goela tumboe* there is trouble every day.

President.—It has been suggested to us that owing to the introduction of the P. O. J. variety of cane in Java some of the factories are producing more cane than they can crush and it has been mooted that they should utilize their old crushing machinery to turn out *gur* for the Indian market. Have you heard of any such suggestions?

Mr. Mulji.—No. My people write to me very clearly that no sugar mill is making this cup sugar or *goela tumboe*.

President.—I know that they are not at present, but take a factory which has a crushing capacity of, say, one lakh tons of cane a year and it has always been producing a lakh of tons in the past. Owing to the introduction of P. O. J. cane it finds that it has 1 lakh and 20,000 tons. It has been suggested to us that some of the mills are thinking of utilizing their old machinery to crush this extra 20,000 tons for making *gur*.

Mr. Mulji.—I have not heard anything about this.

Mr. Rahimtoola.—You have just now told us that as far as your Java office is concerned they have written that there is no such proposal: can you give us the date of that letter?

Mr. Mulji.—It was written in the month of July, I think.

Mr. Rahimtoola.—And it is stated clearly that there is no such scheme for the future even under contemplation?

Mr. Mulji.—I did not enquire about this particularly and they have not mentioned that. But if you want the information I can send a wire and get the information for you.

President.—What is the effect of the import of *goela tumboc* and cup sugar on the Indian market?

Mr. Mulji.—It has no effect at all. Only 2,000 tons of this stuff has no effect on 3 million tons of *gur* that we are making here.

President.—We were told by a number of very enlightened agriculturists at Poona that it does affect their sales of *gur* because every year although only a few hundred tons of this cup sugar is imported, before it comes in the rumour spreads through the bazar that Java is going to import a large quantity of first quality *gur*; as a result the *gur* prices drop and cultivators lose about a rupee a maund; after a month the rumour disappears and the prices go up again.

Mr. Mulji.—Sometimes some of the middlemen who are buyers of this *gur* may be spreading this rumour and telling them that if you keep a higher price for your *gur* Java *gur* will come in and that sort of thing. About 12 months ago a Dutch Government official came to India to enquire about the co-operative movement and also about *gur*. I had a long discussion with him. In Java there is legislation under which factory owners cannot buy cane from outside; they can crush their own cane but they cannot buy from other agriculturists. On account of the lower rates for sugar, etc., the poor agriculturists who are a little bit far from the factories and who by legislation cannot sell to those factories are suffering and he was anxious to find out if there was any chance of making a better class of *gur* for sale in India. I made enquiries and I would say that the maximum capacity of these fields is about 20,000 tons *gur*. Java itself wants some *gur*, so that the quantity they can export is about 10,000 tons and for this 10,000 tons India is not the only buyer, there are Singapore and China. In China some confectionery people buy this cup sugar. Sometimes it is exported to Japan also. When I was in Java in 1924 Japan was their principal buyer of cup sugar. So that India is not their only buyer. Then again the price of this cup sugar is not so tempting that factory owners will think of making it.

President.—Still from the point of view of the actual cultivator it would be an advantage if these rumours about Java sugar being imported were set at rest?

Mr. Mulji.—But how will you stop these rumours which have no foundation?

President.—Let us say for the sake of argument that Java *gur* was prohibited then the rumours would be set at rest once for all.

Mr. Mulji.—If the Government of India prohibits the import of cup sugar there is nothing wrong in it and I won't object to it.

President.—Actually in point of fact if Java cup sugar and *goela tumboc* were stopped from coming into the country altogether it would not really affect the consumer one way or the other, would it?

Mr. Mulji.—Not the least.

President.—So why not stop it?

Mr. Rahimtoola.—You told us just now that you personally have no objection if such a course were adopted by the Government of India?

President.—Supposing instead of having a duty of 25 per cent. *ad valorem* plus Rs. 1-8-0 per cwt. on cup sugar we imposed the same duty on cup sugar as on white sugar? On ordinary sugar it is Rs. 6 per cwt. Suppose we put Rs. 6 per cwt. on cup sugar also that would not hurt anybody.

Mr. Mulji.—Even then the rumours will be there. The rumour is there because the agriculturists are ignorant.

Mr. Rahimtoola.—Do I understand that your point is that it does not create any serious competition?

Mr. Mulji.—There is no competition.

Mr. Rahimtoola.—Because it is coming in such negligible quantities?

Mr. Mulji.—The Tariff Board may ask the Government of India to make a provision that not more than so many tons should be imported. If it is found that more than the specified quantity is being imported Government can put a prohibitive duty. But at present there is no necessity for it.

President.—On the other hand if the big Java factories seriously thought that it was worth their while to challenge the market in India for *gur* and were to turn out *gur* with all the scientific means at their disposal, it might seriously affect the business here?

Mr. Mulji.—Very recently a representative of the Java Trust came to India; he is in India to-day. He had been to my office a month ago. He told me that his only aim was to enquire if there was any complaint about the import of sugar or if we had any suggestions to make. I warned him then that if he had the manufacture of *gur* for import into India in his mind then even we as merchants would ask Government to take steps to prevent it. Then he talked of the condition of the sugar industry, the cost of production and so on and incidentally enquired whether India would be able to compete with Java or whether Government would do anything which would prevent Java from competing in India. They have attained such a high level of efficiency that they do not care what measures are taken here. When the representative from Batavia came to India I told him not to attempt to make jaggery on a commercial scale and dump it into India, and that if he did so the Government of India would take steps to stop it. I think he was convinced and he said he would warn his Government about it.

President.—You said just now that the idea of India making any sugar in competition with Java caused the representative of the Java Trust considerable amusement and he thought Government would neither take steps to improve the Indian industry nor would the industry be able to stand against Java.

Mr. Mulji.—Yes, from the results up to now. Since the report of the Sugar Committee everybody considers that it is a hopeless case for India.

President.—What is your impression? Supposing contrary to the expectation of the representative of the Java Trust the Government of India did take steps to encourage the Indian Sugar industry, do you think the Java Trust would sit quiet and allow the Indian factories to produce enough sugar to displace the Java sugar?

Mr. Mulji.—It looks as if the Java people are seriously convinced that it would not pay them to extend the present industry except making improvements in their cane. Besides India they have got a big market in China. Financially they are very sound and they can help China by giving sugar.....

President.—My point is this: about one million tons of Java sugar is imported to India. Suppose the Indian factories were increased and produced 500,000 tons and replaced half the present supply now obtained from Java, how would the Java Trust re-act to that?

Mr. Mulji.—Every year the consumption of sugar in India is on the increase so that whatever the quantity we may produce in India we must import the same quantity of Java sugar.

President.—I am doubtful about that because in 1910 India imported 630,000 tons of sugar and in 1930 it is importing about a million tons, that is 370,000 tons increase in 20 years at the rate of 18,000 tons a year.

Mr. Mulji.—Take the statistics of 1920 and 1930.

President.—That would be fallacious because during the war the import of sugar was practically stopped. India got up to 630,000 tons in 1910.

Mr. Mulji.—From 1924 to 1930 the import is on the increase and it will go on increasing. The consumption of tea, coffee, sweet waters and so on is on the increase. Take the Punjab. There the educated people are now taking tea. When they go to the villages they drink tea there and thus introduce its use in the villages. So that looking at the increase in consumption to-day and when the economic stress is at its highest, I don't think India will import less than 11 lakhs tons a year in future.

President.—We will look at the figures and see. Apart from that, let us suppose that Indian factories were established which would replace a very considerable portion of the amount of sugar at present supplied by Java, what is your impression of the action that the Java people will take? Will they endeavour to restrict the activities of the Indian factories?

Mr. Mulji.—When they are convinced that the Government of India is seriously concerned for the industry they will have to look for other markets. They have other big markets where they can sell their sugar and they will have to tap those markets.

President.—That is to say if any action is taken by the Government of India to increase the output of sugar in India that action must be fully adequate so as to convince the Java people that the Government is in earnest, is that correct?

Mr. Mulji.—That is correct

President.—I mean, no half measures?

Mr. Mulji.—Half measures will not do any good to the industry.

President.—Do you consider that the price of imported sugar affects the price of *gur* at all?

Mr. Mulji.—No.

President.—It is a very puzzling problem. It has never affected it at all?

Mr. Mulji.—Never. I can give examples. If you compare the price of *gur* with the price of sugar every year you will find that in one or two months at least the price of *gur* will be higher than sugar even after this duty.

President.—The opposite opinion has been expressed by the Imperial Council of Agriculture Research, but on examining the figures we do find especially in the last five years that there has been a steady fall in the price of sugar and in the same period at least on two occasions the price of *gur* has risen considerably.

Mr. Mulji.—Yes.

President.—What would you consider the main determining factor in the price of *gur*?

Mr. Mulji.—I have got some suggestions to make about this *gur*. I would suggest that legislation should be introduced prohibiting the manufacture of banawat *gur*.

President.—Do you think that banawat *gur* does affect the price of *gur*?

Mr. Mulji.—Banawat *gur* does affect the price sometimes. The adulterated *gur* is not so rich in quality and it must be stopped.

Mr. Rahimtoola.—You consider that it should be stopped from the health point of view?

Mr. Mulji.—Yes, also from the price point of view and also from the point of view of competition. Legislation must be introduced with that object in view. Another thing is that these banawat factories haven't got any big machinery. They have simply pans, which pans a big factory whose output is 4,000 to 5,000 tons must have. They will be worth about Rs. 2,000. By adopting such legislation as I propose, no machinery worth the name will be forced to lie idle. You first told me that some of the agriculturists in Poona told you about Java *gur*. These agriculturists in Poona know well that if the price of *gur* goes up, banawat *gur* will compete. That fear would be dispelled by legislation which is the most essential thing. If the Government want to do anything, they must immediately stop the adulteration of *gur*.

President.—What would you say would be the output of banawat *gur* in a year?

Mr. Mulji.—In 1924 it was about 50,000 tons. In 1925 it may be about the same. This is my rough guess, because no actual statistics are kept. But I know many of the factories and from my experience of the purchase.

of sugar sales and movements I can say that that is about the quantity. When Mr. Nayak of Pusa had been here, I had a long discussion with him and gave him letters of introduction to some factories whom I know to allow him to see these banawat factories. Mr. Nayak was convinced that yearly production might be 50,000 tons if the rate of *gur* was a little high.

Mr. Rahimtoola.—Can you tell me how many factories there are in the whole of India?

Mr. Mulji.—These are not regular factories. They are simply ordinary godowns and used as factories when the price goes up.

President.—Your point is that steps must be taken to put an end to the adulteration of *gur*?

Mr. Mulji.—That is the first thing to be done.

President.—As regards *gur* prices, I suppose they depend mainly on the outturn of *gur* for the year. If there is a good crop of cane and a lot of *gur* turned out, then prices fall and if there is a bad season, then prices rise; but they are independent of white sugar?

Mr. Mulji.—Entirely independent. If this legislation comes into force, then the molasses practice also will be stopped.

President.—The practice of mixing molasses and the imported sugar?

Mr. Mulji.—Yes, that will also be stopped. Another thing I will suggest is this: you must have seen all the samples of Java standard colours. In this banawat *gur* I have said that some high coloured brown sugar is also being used. From my knowledge I can say that either brown sugar of colour No. 20 and above is used or white sugar is used. Sometimes some percentage of white sugar and sometimes some percentage of brown sugar is being used in mixing in banawat *gur*. Suppose 50 per cent is Meerut *gur* and brown sugar is not of high colour, say No. 22 or 23, they take 20 per cent. of white sugar and 20 per cent of brown sugar. When these two are mixed the colour becomes yellowish, but they can't mix under any circumstances No. 18, because No. 18 is red. When it is boiled, the colour will be spoiled. Anything below No. 20 can't go into banawat *gur*.

Mr. Rahimtoola.—The whole point is to preserve the colour?

Mr. Mulji.—At present the classifications are as follows:—

	Rs.	A.	P.
(1) Sugar crystallised or soft 25 Dutch Standard and above	6	0	0
(2) Sugar, crystallised or soft inferior to 24 Dutch Standard but not inferior to 8 Dutch Standard	5	8	0

I would suggest that the classifications should be as follows:—

	Rs.	A.	P.
Sugar, crystallised or soft 20 Dutch Standard and above	6	0	0
Sugar, crystallised or soft below 20 Dutch Standard	5	8	0

President.—You want a new classification?

Mr. Mulji.—Yes. Brown sugar of high colour must be taken into account in the classification of white sugar.

President.—Actually a number of these brown sugars polarise at the same level as white sugar?

Mr. Mulji.—In Java when we buy from the Trust we do not know what kind of sugar we will get and what colour it will have. We sometimes get No. 18 and sometimes No. 20 and on polarisation we have to pay the difference. After legislation in Japan last year—Japan is for encouraging the refining industry—the duty on high-coloured sugar is lower and the duty on light-coloured sugar is higher. Therefore by making purchases from these

people who have purchased from the Trust, that is by second-hand purchases, we can get brown sugar at a good rate because it is no use to them for exporting to Japan. So in Java we can buy Nos. 20 to 23 at the rate of brown sugar say No. 18 or No. 20, sometimes an anna per cwt. more. Here we get a better price, because there is a good demand.

President.—Actually these Dutch Standards are standards of colour?

Mr. Mulji.—Yes.

President.—A Dutch Standard of 20 may have the same polarisation as the Dutch Standard of 25?

Mr. Mulji.—I am talking of colour.

President.—Actually in sweetness they don't make any difference?

Mr. Mulji.—Here it is being mixed because of good colour. We have given strict instructions to our Java office to export only sugar of high colour. This brown sugar of high colour is being used in two things, viz., in the manufacture of banawat *gur* and bura sugar. You must have heard while in Delhi that there are various small bura factories. In bura factories when the rates of Meerut and United Provinces jaggery are lower, at that time they put a certain percentage of *gur* and white sugar—say 15 per cent. of *gur* and 85 per cent. of white sugar and they make this *deshi* sugar. I have my own office in Delhi and I often go to Delhi and see all these dealers who are making bura and who are wholesale dealers of this brown sugar and who are my regular customers. To-day the price of *gur* is lower. There is no enquiry from them of this brown sugar. As soon as the price of *gur* goes up a little they ask us to quote and at once buy this brown sugar and stop mixing with *gur*. So the *gur* is being affected there. If this high colour brown sugar is put into the same class as white, then it will be dearer by 8 annas per cwt. They will not attempt to mix it instead of *gur* and this industry is a very important industry in the Punjab. In Central India let us take Ujjain which is consuming 10,000 tons of sugar in a year. There are small factories making bura. These factories at the time of *gur* season mix *gur* for 3 or 4 months and for 8 months they are using this brown sugar, because when *gur* becomes a little higher, they use brown sugar. Therefore if this brown sugar of high colour is put in line with the duty on white sugar, it will help the *gur* industry a lot. I have brought these very samples for this very reason (Shown).

President.—Can we have a look at these samples?

Mr. Mulji.—These are of 1926.

President.—They are of Dutch Standards?

Mr. Mulji.—Yes.

President.—You have no Goela Tumbo?

Mr. Mulji.—No. I have sent samples to Pusa.

President.—Mr. Mulji, have you any statement to make regarding this enquiry besides what you have already said.

Mr. Mulji.—You have now I think nearly completed the enquiry and you know much more than I can say. From Pusa you must have got all the information. They are very competent people. I have learnt much from them.

President.—So have we.

Mr. Mulji.—This suggestion you have noted about changing the duty on brown sugar

President.—What is the brown sugar below 20 used for?

Mr. Mulji.—If such legislation is passed, then I think the import of brown sugar will be much less. Mostly it is being used for army purposes.

President.—That is my impression. Under 20 practically it is all taken by the army. Whatever we do with that, it doesn't affect the consumer.

Mr. Mulji.—Yes, it will help the *deshi* industry.

President.—Why not put on the same duty on brown as on white if it is only going to affect Government?

Mr. Mulji.—In any way it will not affect.

President.—It will help the *gur* industry.

Mr. Mulji.—Has Government any idea of encouraging the refining industry?

President.—From what we have seen of the refineries it doesn't seem to be possible to run them on very economic lines.

Mr. Mulji.—Why, in England, they have. You know very well Tate and Lyall.

President.—Now they do grow a little sugar. Formerly they grew none at all.

Mr. Mulji.—The refining industry is encouraged in Japan. In China this year they have begun to encourage the refining industry. They have fixed the duty at such a level as to encourage such an industry.

President.—As far as India is concerned if the refining industry is going to depend on imported sugar, it will use less Indian cane.

Mr. Mulji.—That is not the case. By encouraging the refining industry what will happen is that, whatever sugar is produced in India direct from cane by refining industry, India will get sugar at a competitive price for brown sugar refining purposes from the world. Let us take the instance of Cuba which is producing 5 million tons of sugar who is an eager seller even at a cheap rate still. We are not in a position to import, because it is brown sugar.

President.—What is your idea on that?

Mr. Mulji.—My idea is that the refining industry should be encouraged.

Mr. Rahimtoola.—Can you suggest any means?

Mr. Mulji.—Yes, by differential duty below No. 10, and from 10 to 25 class.

President.—Why should not the refining industry use Indian *gur*?

Mr. Mulji.—Our *gur* is raw sugar. The thing is this. By proper encouragement it is natural that we will make more *gur* (raw sugar) because in India our acreage is so big that a little improvement in cane will bring surplus *gur*.

President.—The best thing is to improve the cane.

Mr. Mulji.—Whatever the Tariff Board may do, the first thing to be done is to take more from the soil. Java has prospered by that way and what I have read leads me to the same conclusion. That has been the only reason why other countries have been able to lessen their cost. At present we are producing about 1.10 or 1.15 tons per acre. Ours is the lowest. It is not, I think, difficult to produce 2 tons per acre.

President.—It is quite likely.

Mr. Mulji.—Then our production of *gur* will be 6,000,000 tons. At that time, what will be the plight of the agriculturist? There will be over-production. If there are refineries, they would help a lot. We can keep some for local consumption and the surplus we can export to the adjoining countries.

Mr. Rahimtoola.—Don't you think that it is a better method to encourage the refining industry by giving them *gur* produced in India?

Mr. Mulji.—It is not sound.

Mr. Rahimtoola.—Having regard to the fact that if the Government of India give adequate protection to the industry, within a year or two there will be a large amount of *gur* on the market?

Mr. Mulji.—Yes.

Mr. Rahimtoola.—Therefore this will amount to an indirect encouragement to the refining industry.

Mr. Mulji.—Yes.

President.—That is to say, in your view the Tariff Board should make a recommendation in their report urging on the Government of India to spend adequate sums on the improvement of varieties of cane, on demonstration, on technical work and generally on improving the agricultural production of the country.

Mr. Mulji.—Demonstration, technical work—all those things are going on. Supposing the poor people get the knowledge, where are the means to take advantage of it? For instance they require oil-cake. They have no money to buy it at the beginning. That is the difficulty. Supposing, before sowing, they are able to get sufficient manure, they will produce in two years 50 per cent. more cane. This the Government of India can do through the various Agricultural Departments.

President.—You have not seen the results of demonstration in the Rohilkhand Division. In Rohilkhand, owing to the very great interest Mr. Clarke has taken in sugarcane cultivation there and the work he has put in in the matter of demonstration he has been able to secure 78 per cent. of the total area under improved varieties.

Mr. Mulji.—I don't say that it is not necessary. My contention is that knowledge without means is of no use.

Mr. Rahimtoola.—Do I understand you to mean that if the Government of India supply information free and give them all the expert knowledge at the soil itself, then that would be a sufficient indication for the improvement of the soil?

Mr. Mulji.—Yes. I must say that they must be supplied with the means. That is the most urgent thing. Last time when I appeared before the Board, I suggested that whatever extra duty was put on, that money should be earmarked for work of this sort.

President.—I remember that

Mr. Mulji.—Of course, it comes to a huge sum. But my request at that time was that these poor agriculturists should be helped with means. You might suggest that adequate protection should be given to the industry and that expert knowledge and other things should be provided. Knowledge and protection would be of no use to them because they have not the means to buy manure and other things.

President.—We must make their crops more profitable; that is all.

Mr. Mulji.—Yes. For two or three years if some help is given, they will prosper automatically. This can be very easily done through co-operative societies and Government Agricultural Departments.

President.—And by raising the price of cane?

Mr. Mulji.—Yes, when an adequate duty is put on, the price of cane and other things will go up automatically.

President.—There is a point raised in a letter which the Government of India have received from the Sugar Merchants Association of Bombay.

Mr. Mulji.—I wrote that letter.

President.—I thought so. That is about sugarcandy.

Mr. Mulji.—The sugarcandy imported from China-Hongkong is only charged an *ad valorem* duty.

President.—The duty is 25 per cent.

Mr. Mulji.—Yes. That is wrong.

President.—You see no reason why it should not pay the same duty as white sugar?

Mr. Mulji.—Up till now nobody has seriously tried to undersell it or tried to import such sort of sugarcandy. Suppose Java makes sugarcandy or I open a sugarcandy factory in Java. The price of sugar is Rs. 5-4-0 per cwt. The making charge will come to 12 annas. The total cost will be Rs. 6 per cwt. The 25 per cent. duty will make it Rs 7-8-0, whereas sugar is

being sold at Rs 12 Up till now, nobody has thought of it. Let the Government of India be on the look out so that nothing happens in the future. It is necessary to safeguard the sugar trade and the sugar industry.

President.—Of course sugarcandy can be used as a substitute for sugar.

Mr Mulji.—Sugarcandy is more popular than sugar, in fact at a slightly higher price sugarcandy is sold, because it is more refined.

Then, as regards molasses, I told you last time that Bombay did not import molasses in any large quantity. After that, I had toured some places and have come to know that a high or a prohibitive duty is necessary in the case of molasses. Recently we have had letters from upcountry saying that on account of jaggery rates having gone down the users of molasses have taken to buying Indian *gur rasi* (liquid form of *gur*). It comes to this that when the rate of jaggery goes high, molasses is used and *vice versa*. Looking to the fact that the import of molasses is increasing every year, I am inclined to think that molasses is seriously competing with *gur* and sugar industry. Here I might add that the day before yesterday I had a telegram from Java saying that the price of hard molasses had gone down by 50 per cent. The reason is this. When we have the jaggery season, they put the market low and when our jaggery season is over, they take the market up. That can be very easily manipulated in the case of molasses. The Pure Cane-sugar Molasses Company in Java has got a world wide organisation. It is a powerful company. At present the company has contracted to buy molasses from all the mills for 5 or 10 years.

President.—Contracted at very low rates too!

Mr Mulji.—Yes. They are manipulating in molasses. Suppose in India they cannot sell at this rate, they can quote any rate and go on keeping it

President.—What is the name of the Company?

Mr. Mulji.—Pure Cane Molasses Company. There is also another organisation in Java. I gave you one instance of this Pure Molasses Company, whose capability and knowledge are such that they compete in India throughout the year with our *Gur rasi* industry. It is not a small item either. If we can stop the importation of molasses, and the adulteration of brown sugar in *gur* and also the adulteration in bura sugar, at least one lakh of tons of sugar in molasses and brown sugar will be out of India and that will help the *gur* industry by at least one lakh of tons if not more.

President.—It is only very occasionally that molasses is used as a substitute for *gur*.

Mr. Mulji.—I know this from my Java office—though I have no knowledge—that *gur rasi* and molasses are used for the same purpose, *viz.*, for mixing with tobacco, leaving aside the question of unethylated spirit. My opinion is that molasses is seriously competing with our *gur* in the same way. Last time when I appeared before you, we had a talk about price levels. At that time the price was Rs. 5-8-0 or Rs. 5-10-0. In determining this question, the price factor will have to be considered. The market had touched Rs. 5. Recent reports show that the combination which was broken up is now being re-formed in Europe and to-day the conference is sitting there. I have also received telegrams from Java that the combination is likely to be formed this time. Looking to all these things, it strikes me that the market has reached the lowest level.

President.—We have received information from a big importer in Calcutta on this particular point. He said that the market view was that if this conference came off, it was possible that the price would be stabilised at somewhere about Rs. 8-5-0 a maund, in the Calcutta market.

Mr Mulji.—What is it to-day?

President.—Rs. 8-8-0. We were told that the price would not go up because if it went up, the large stocks which they have could be put at once on the market.

Mr. Mulji.—My idea is that if the conference was successful, the price would go up at least by 15 per cent. not at the time, but by and by.

Mr. Rahimtoola.—15 per cent. will be about 12 annas.

Mr. Mulji.—From 12 annas to one rupee. The price would not decline but would go up.

President.—As you know, market views differ on such things. His view was that there were uncertainties in the position. First of all there would be big stocks segregated which could be put on the market if the price went up. Secondly the position in Russia is obscure and at any time Russia may produce several thousand maunds of sugar and dump it on the market.

Mr. Mulji.—Everybody is afraid of the Russian programme. Recent telegrams show that Russia is also willing to join the combination.

President.—We have not seen that.

Mr. Mulji.—I have seen a report from Czecho Slovakia.

President.—Is that an official report?

Mr. Mulji.—It is a sugar expert's report.

President.—One could not reply on reports so far as Russia is concerned.

Mr. Mulji.—Russia is at present under-fed in respect of sugar. Russia requires much more sugar.

President.—We received information while we were engaged in the Oil Enquiry that internally Russia was unsufficiently supplied with oil, but that had not prevented them from putting oil in other markets, in order to get ready cash. The Calcutta importer's view was that it was quite possible that the immediate effect of the conference, if successful, might be to push up the price by 12 annas, but he thought that the price would be stabilised at Rs 8-5-0.

Mr. Mulji.—There are two reasons. All over the world except in India, all sugar producers have in one way or another combined. If the stabilisation plan succeeds, then looking to the present uneconomic price, an increase of 15 per cent. is very easy. Even now since two days Java has stopped selling. Everybody is under the impression that Java has surplus sugar, but it has stopped selling.

President.—The effect of the conference will show itself in the next fortnight.

Mr. Mulji.—It may be to put up the export price, but it looks as if the lowest level has been reached now.

Mr. Rahimtoola.—Do I understand that the Russian factor is not to be taken into account at the present juncture?

Mr. Mulji.—Yes

President.—Surely that is a large assumption. You can never assume anything about Russia.

Mr. Mulji.—Nobody knows exactly what the Russian plans are. Even from London in the mail reports it appears whether the production is 2 million tons or less than 2 million tons nobody knows exactly.

Mr. Rahimtoola.—According to your information, Russia is under-fed at present in the matter of sugar. It means that if things go on as at present Russia will not be a serious factor for sometime to come

Mr. Mulji.—Last year Russia produced about 10 lakhs tons and this year she will produce about 20 lakhs tons and with such a larger quantity only 20 days ago Russia was offered 2 lakhs tons of sugar by one party which she refused to sell. If Russia was eager to sell she could have sold this quantity

Mr. Rahimtoola.—One can't say about the future whether they would be prepared to sell.

Mr. Mulji.—Russia has got a big plan for increasing and doubling the production but Russia wants more sugar for herself, and I don't think Russia is the determining factor. I am more afraid of Germany than Russia.

President.—As regards this Conference what are your reports: for how many years are the Conference arrangements to be in force?

Mr. Mulji.—I think it is a three years plan.

President.—So that unless the Conference breaks down in the meantime one could rely on a stabilized price for three years; if we based our protection on the present price which is Rs. 8-3-0, your view is that the Indian industry would be fairly safe?

Mr. Mulji.—Yes.

MESSRS. HAROON TAR MOHAMED AND COMPANY.

**Oral Evidence of Mr. ESHAK MOOSA, recorded at Calcutta on
Friday, the 12th December, 1930.**

President.—Mr. Moosa, you are a partner in the firm of Messrs. Haroon Tar Mohamed & Co.?

Mr. Moosa.—Yes

President.—Your firm deals in molasses and sugar?

Mr. Moosa.—We generally deal in molasses and a little bit in sugar.

President.—Where do you import from?

Mr. Moosa.—From Java entirely. Before the war we were importing soft molasses from Mauritius but that import has been discontinued and we now have business with Java alone.

President.—Do you purchase from the V. J. P.?

Mr. Moosa.—There is no Trust for molasses.

President.—You purchase direct from the factories?

Mr. Moosa.—Yes

Dr. Matthai.—Does not the V. J. P. deal in molasses at all?

Mr. Moosa.—No.

President.—Does your house purchase direct from the factory or from exporting houses from Java?

Mr. Moosa.—We are purchasing directly from the mills.

Dr. Matthai.—You have got offices in Java?

Mr. Moosa.—Yes.

President.—How do you export your molasses?

Mr. Moosa.—In baskets, crates and casks.

President.—What is your relation to this new Pure Cane Molasses Trust?

Mr. Moosa.—After they established their offices in Calcutta we have joined them in respect of soft molasses and the condition is that we are not to import soft molasses from Java, that is since 1929. But we can import hard molasses from Java.

President.—Can you give us any information as to the price which factories obtain in Java for their soft molasses at the factory?

Mr. Moosa.—10 guilders per ton.

President.—That is about Rs. 11?

Mr. Moosa.—Yes.

President.—That is about 8 annas a maund. Is that the prevailing rate now?

Mr. Moosa.—Yes.

President.—Is that higher or lower than it was some years ago?

Mr. Moosa.—Lower.

Dr. Matthai.—Was the price higher about a month ago?

Mr. Moosa.—A month ago the rate was nearly Rs. 11-8: from last year prices have been reduced very much.

President.—What was the price last year?

Mr. Moosa.—40 guilders per ton ex-port.

Dr. Matthai.—And now it is only 10 guilders?

Mr. Moosa.—Yes.—This is ex-mill.

Dr. Matthai.—10 guilders *ex-mill* in Java per ton?

Mr. Moosa.—Yes. Six months ago it was 25 guilders *ex-mill*.

President.—What was the price in 1926?

Mr. Moosa.—1½ to 2 guilders per ton *ex-mill*.

President.—So that molasses has increased in price very largely recently?

Mr. Moosa.—Yes.

Dr. Matthai.—We were told that the present price of molasses in the Calcutta market is Rs. 2-6 per maund.

Mr. Moosa.—That is so.

Dr. Matthai.—If it is 10 guilders a ton at the factory in Java how can it be so high as Rs. 2-6 per maund in Calcutta?

Mr. Moosa.—I am talking of bulk molasses which is coming up in tank steamers.

Dr. Matthai.—The price which is quoted in Calcutta of Rs. 2-6 per maund. Is that for molasses in bulk or molasses in tins?

Mr. Moosa.—In bulk.

Dr. Matthai.—This price of 10 guilders per ton is also for bulk molasses?

Mr. Moosa.—This is the factory rate. This is the price for soft molasses whether you are bringing it in bulk or in tins.

Dr. Matthai.—I don't understand. The price which is quoted in the Calcutta market of Rs. 2-6 per maund, is that for molasses in cans and tins?

Mr. Moosa.—In bulk

Dr. Matthai.—This price of 10 guilders a ton is also for molasses in bulk?

Mr. Moosa.—The original price at the factory for soft molasses is 10 guilders whether you bring it in bulk or in tins. That is the price *ex-mill*.

Dr. Matthai.—Since you have offices in Java I believe you have some information about the various charges which have to be incurred from the factory in Java to the Calcutta market, have you not?

Mr. Moosa.—Yes.

Dr. Matthai.—10 guilders a ton is how much a maund in rupees?

Mr. Moosa.—About As. 9-6 per maund.

Dr. Matthai.—As. 9-6 at the factory. Can you give us all the charges right up to the Calcutta market? Take first of all transport from the factory to the port in Java.

Mr. Moosa.—It depends upon the distance of the factory from the port. Some factories are nearer the port.

Dr. Matthai.—Take a factory which is situated at an average distance from the port.

Mr. Moosa.—About 10 guilders per ton.

Dr. Matthai.—From the factory to the port in Java?

Mr. Moosa.—F.o.b.

Dr. Matthai.—That is another As. 9-6 per maund. Then you have to take the freight from Java to Calcutta there is the freight on molasses.

Mr. Moosa.—10 guilders and 25 cents. per ton.

Dr. Matthai.—Let us take it again at roughly As. 9-6. What about landing charges and clearing charges in Calcutta?

Mr. Moosa.—About Rs. 5 per ton.

Dr. Matthai.—That would be per maund, say, 3 annas. What is the duty?

Mr. Moosa.—As. 12-6 per cwt.

Dr. Matthai.—That is another As. 9-6 per maund That comes to about Rs. 2-8 to Rs. 2-10?

Mr. Moosa.—Yes.

President.—11 guilders a ton does not come to as much as 9 annas a maund, does it?

Mr. Moosa.—About that.

President.—Re. 1-1 is equal to one guilder?

Mr. Moosa.—It depends on the exchange

President.—But roughly Re. 1-1.

Mr. Moosa.—At present the rate is Re. 1-1-6.

President.—Let us take 11 guilders as equal to Rs. 12. You get 7·2 annas per maund

Mr. Moosa.—Yes.

Dr. Matthai.—We were told that the charges on sugar from factory to port work out on an average to 4½d. per cwt. That would be 4 annas a cwt. or 3 annas a maund. You give the charges on molasses from factory to port at 5 annas which is rather higher.

Mr. Moosa.—Supposing a man brings molasses in tank wagons, he will have to fill them in tins. Besides that there are cooly charges, boat charges and everything.

President.—It is more expensive than sugar to transport?

Mr. Moosa.—Yes. Here also it is the same charge for landing molasses.

President.—Is the freight in tankers more expensive?

Mr. Moosa.—It is the same.

President.—Freight for sugar would be only 3 annas a maund.

Mr. Moosa.—For molasses freight is more. The freight for sugar is 7 guilders per ton and molasses is 10 guilders and 25 cents.

Dr. Matthai.—So that the price of molasses in India this year as compared with last year is lower?

Mr. Moosa.—Yes

President.—Over a series of years what do you think the factory could expect to get for its molasses—Re 1-8 a maund?

Mr. Moosa.—Before 5 or 6 years they were not getting anything. They were throwing out their molasses.

President.—Take the average for the next five or six years.

Mr. Moosa.—Considering the present average, they are getting something for molasses

President.—So Re 1-8 might be a reasonable price?

Mr. Moosa.—Yes.

Dr. Matthai.—You say some years ago Java molasses or at any rate a large part of them were thrown away.

Mr. Moosa.—Yes.

Dr. Matthai.—Now there is apparently an increased demand for molasses in Java.

Mr. Moosa.—Not for India specially. Molasses goes to Europe too.

Dr. Matthai.—What is the reason for the increase in demand for molasses in the world?

Mr. Moosa.—In Europe we can't say what it is used for. In India molasses is specially used in mixing with tobacco. A small quantity is also used for distillation.

Dr. Matthai.—But the chief use is for the preparation of tobacco?

Mr. Moosa.—Yes.

Dr. Matthai.—At present is there a very large demand in India for molasses for tobacco purposes? Is it a demand which is increasing year by year?

Mr. Moosa.—Not much.

Dr. Matthai.—That is to say is there a larger demand for molasses in India this year as compared with last year?

Mr. Moosa.—No, it is about the same.

Dr. Matthai.—The demand is lower this year?

Mr. Moosa.—Quite so

Dr. Matthai.—Therefore the difference in price of molasses in India between this year and last year is due entirely to the difference in price charged by the Java factory

Mr. Moosa.—There is no question of any difference in price between last year and this year. There are Indian molasses. We hear the crop is very good this year.

Dr. Matthai.—Therefore the prices are lower this year.

Mr. Moosa.—Yes.

Dr. Matthai.—It is because of the increase in the output of Indian molasses.

Mr. Moosa.—Yes.

Dr. Matthai.—You said a short time ago that last year the prices realised by Java factories for molasses were higher than this year.

Mr. Moosa.—Yes.

Dr. Matthai.—That must also be part of the cause for the difference in price.

Mr. Moosa.—There was more demand from Europe last year.

Dr. Matthai.—And therefore Java prices were higher.

Mr. Moosa.—Yes.

Dr. Matthai.—Is there any difference in price between Java molasses and Indian molasses?

Mr. Moosa.—There is.

Dr. Matthai.—What is the difference?

Mr. Moosa.—About 8 annas a maund.

Dr. Matthai.—That is to say Java molasses fetches a higher price of 8 annas

Mr. Moosa.—No, Java molasses are getting 8 annas less.

Dr. Matthai.—What is that difference due to?

Mr. Moosa.—The Indian molasses are made from *gur*.

President.—You mean from jaggery?

Mr. Moosa.—Yes.

President.—You mean khandsari molasses?

Mr. Moosa.—Yes.

Dr. Matthai.—I suppose there is more sugar content in Indian molasses than in Java molasses?

Mr. Moosa.—Yes.

Dr. Matthai.—In the preparation of tobacco is molasses containing a larger amount of sugar preferred?

Mr. Moosa.—There is not so much difference between Indian molasses and Java molasses so far as tobacco is concerned.

Dr. Matthai.—Why do they give a higher price for Indian molasses?

Mr. Moosa.—Java molasses is extensively used especially in Bengal, but in the United Provinces and Punjab they always like Indian molasses. Besides if they buy Java molasses from Calcutta they will have to pay the railway freight and other charges.

Dr. Matthai.—Do you import brown sugar from Java?

Mr. Moosa.—Sometimes we import superior quality

Dr. Matthai.—You don't import inferior quality?

Mr. Moosa.—No.

President.—When you say superior quality, what Dutch Standard is that?

Mr. Moosa.—22 Dutch Standard.

Dr. Matthai.—Nothing lower than that?

Mr. Moosa.—No.

Dr. Matthai.—Have you any information as to the imports into India of inferior sugar from Java corresponding to Indian *gur*?

Mr. Moosa.—We have also imported about 50 tons of inferior *gur*. You mean eatable *gur* molasses?

Dr. Matthai.—Yes. What Dutch Standard is that?

Mr. Moosa.—Dutch Standard 8.

Dr. Matthai.—What is the sucrose content?

Mr. Moosa.—60 to 65 per cent.

Dr. Matthai.—At what price did you buy it last year from Java?

Mr. Moosa.—That was not bought last year, but this year.

Dr. Matthai.—What is the price you paid this year?

Mr. Moosa.—4 guilders 90 cents. per picul f.o.b.

Dr. Matthai.—That would work out to Rs. 4 a maund.

Mr. Moosa.—Yes.

Dr. Matthai.—For what purpose is sugar of that kind used?

Mr. Moosa.—Sometimes it can be used in making sugar.

Dr. Matthai.—For refining?

Mr. Moosa.—Yes. They simply use it for eating purposes.

President.—What do you sell it for?

Mr. Moosa.—We have not sold yet. If we sell it we can't get more than Rs. 4 a maund.

President.—You have paid Rs. 4 and therefore you would lose the duty?

Mr. Moosa.—Yes

Dr. Matthai.—You got it as a sort of experimental consignment?

Mr. Moosa.—Yes.

Dr. Matthai.—I suppose your experience is that inferior sugar of that kind from Java is not likely to command a large market in Bengal.

Mr. Moosa.—It is not coming regularly.

Dr. Matthai.—Do you know whether other people have imported inferior sugar of this kind?

Mr. Moosa.—At present one of the firms imported about 2,000 to 2,500 tons of this sugar.

Dr. Matthai.—This year or last year?

Mr. Moosa.—This year.

President.—It was sent to Lucknow?

Mr. Moosa.—Yes.

Dr. Matthai.—For refining?

Mr. Moosa.—Yes.

President.—How much did that fetch?

Mr. Moosa.—We don't know.

Dr. Matthai.—When you imported this inferior sugar at what rate was it taxed by the Customs?

Mr. Moosa.—25 per cent. on invoice value and Re. 1-8 per cwt. extra.

Dr. Matthai.—It is not charged the duty applicable to molasses, but something more than that?

Mr. Moosa.—Yes.

Dr. Matthai.—There is a suggestion which is made to us that the duty of Rs. 6 which is applicable to sugar of 23 Dutch Standard and above should be applied to every grade of sugar.

Mr. Moosa.—About sugar business we can't explain more. The duty must be applied to all kinds of sugar.

Dr. Matthai.—If a proposal of that kind were made, would you object?

Mr. Moosa.—No, if you didn't include molasses.

Dr. Matthai.—It doesn't apply to molasses, but only to inferior grades of sugar.

Mr. Moosa.—We don't find any objection.

Dr. Matthai.—Supposing this duty of Rs. 6 which is now applied to 23 Dutch Standard and above were applied to sugar between 23 Dutch Standard and 8 Dutch Standard, then also you would not object?

Mr. Moosa.—No, because the inferior sugar is not coming in large quantities.

Dr. Matthai.—Manufacturers of *gur* in various places have told us that if inferior sugar of this kind, 8 Dutch Standard, were allowed to be imported into India at a lower rate of duty, then the manufacturers of *gur* in India might be affected.

Mr. Moosa.—Quite.

Dr. Matthai.—You are not concerned at all with Indian *gur*?

Mr. Moosa.—No.

THE CALCUTTA SUGAR IMPORTERS' ASSOCIATION.

**Oral Evidence of Mr. E. K. PRICE and Mr. SHANKERLAL
K. TRIVEDI recorded at Calcutta on Thursday, the
11th December, 1930.**

President.—Both of you gentlemen appear on behalf of the Calcutta Sugar Importers' Association?

Mr. Shankerlal.—Yes; Mr. Price is the Chairman and I am a member of the Committee.

President.—Do you represent the bulk of the imports of sugar into Calcutta?

Mr. Shankerlal.—Yes.

Dr. Matthai.—You deal both in cane sugar and beet sugar?

Mr. Shankerlal.—Yes.

President.—Do you handle molasses?

Mr. Shankerlal.—I do.

President.—When you say the bulk of the sugar, what proportion of the sugar is imported into Calcutta by your members?

Mr. Shankerlal.—Our members deal in more than half of the sugar and all the molasses.

President.—Do you personally import any molasses, Mr. Shankerlal?

Mr. Shankerlal.—I used to but not now-a-days, but I am the sole selling agent of The Pure Cane Molasses Co of India, Ltd.

Mr. Rahimtoola.—When did you establish this Association?

Mr. Shankerlal.—About four or five years ago. I will send you all the reports.

Mr. Rahimtoola.—What is the total number of members?

Mr. Shankerlal.—Originally it was 50 but gradually it has come down and it is now 30 because of the bad condition of trade.

Mr. Rahimtoola.—Those who have resigned have done so owing to not doing the business?

Mr. Shankerlal.—Yes.

Mr. Rahimtoola.—You have got a regular constitution?

Mr. Shankerlal.—Yes. We are affiliated with the Bengal Chamber of Commerce.

Mr. Rahimtoola.—Have you discussed this questionnaire with the Bengal Chamber of Commerce?

Mr. Shankerlal.—They have left everything to us.

Mr. Rahimtoola.—Do I understand that whatever you say they will agree to?

Mr. Shankerlal.—All the importers will agree.

Mr. Rahimtoola.—I am talking of the Bengal Chamber of Commerce to which you are affiliated?

Mr. Shankerlal.—All papers concerned with sugar and molasses they send on to us. If there is to be any discussion, that is carried on by our members in the usual way. All members dealing with sugar and molasses were consulted before the answer was sent to you. Most of the members of the committee are members of the Bengal Chamber of Commerce. Mr. Price, for example, represents Messrs Shaw Wallace & Co., I myself represent Messrs. Haji Shakoor Gunni and in this way most of the members of our committee are representatives of firms which are members of the Bengal Chamber of Commerce. There is hardly a name in the Custom House as importer which is not a member of our association. Only one exception is Ralli Brothers who

have not joined the Association for reasons of their own, otherwise all people concerned with importation of sugar are members of this association. When there is any dispute on which we have to go up to Government our opinions are generally forwarded to Government through the Bengal Chamber of Commerce and in the same way any communication from Government is addressed to the Chamber and is forwarded to us by them for an expression of opinion.

President.—I take it that on general principles you are opposed not necessarily to any protective duty but to any increase in the present duty?

Mr. Shankerlal.—Yes. You must see what is the motive. If the intention of the Tariff Board is to cure the sugar industry which is sick then we would agree to an increase in the duty with earmarking...

Dr. Matthai.—What do you mean by earmarking?

Mr. Shankerlal.—We importers have been fearing every month that the Tariff Board ...

Dr. Matthai.—Supposing an increased duty is levied your suggestion is that the whole of the proceeds of that increased duty should be earmarked for the development of the sugar industry?

Mr. Shankerlal.—Yes.

President.—The question of protection as such I gather you are not opposed to, that is to say if the present revenue duty which comes to Rs. 4-6 per maund is altered into a protective duty and fixed for a period of years, then I understand your association would not object to that?

Mr. Shankerlal.—They would object because the prices are so low. I noticed in to-day's paper that the Conference is holding its sittings in Brussels and their decision would have more effect than an increase or reduction in the duty so far as India is concerned, if they agree to stabilization. Every trade requires stabilization and the reduction of costs, reduction of taxation that would be the motive of any industrial development.

Dr. Matthai.—I don't quite follow your point. Supposing the suggestion that we make to Government is that the present revenue duty should be continued and should be placed definitely on a protective basis but there was no increase suggested, what would be the relation of that proposal to any stabilization scheme that you could think of?

Mr. Shankerlal.—That is what I am trying to hint at. We would all like to see a better price as importers and traders because in a brighter market we can handle more freely than in a dull market.

Dr. Matthai.—If the stabilization scheme is agreed to by the various countries who are now in conference, the effect of that stabilization would be a tendency for the price to rise?

Mr. Shankerlal.—Yes.

Dr. Matthai.—When the price rises in that way and the duty is maintained on the present basis your idea is that the effect would be an increased burden on the consumer?

Mr. Shankerlal.—Not that.

Dr. Matthai.—At present let us say the price is Rs. 8-2-6 in the Calcutta market; now if this stabilization scheme is agreed to and if we assume for argument's sake that within about two months from now the price rises to Rs. 8-6, your suggestion is that if the revenue duty is continued on the present basis it would mean that the consumer pays Rs. 8-6 more than he would have to pay otherwise and therefore you suggest that the revenue duty should be reduced to that extent? Is that what you are driving at?

Mr. Shankerlal.—Not that. We like that the industry should be started but it should have been started long before. Looking to the present policy of Government and the condition of the country—there is this uncertainty every day about levying of fresh taxation or that sort of thing—I say it is very difficult for traders doing import trade.

Dr. Matthai.—I quite understand that it would be an unsatisfactory thing for the trade that there should be uncertainty about the rate of duty. But

supposing my suggestion was that a duty of Rs. 6 per cwt. should be continued for a period of 10 or 15 years and there should be no change of duty, that is to say the rate of duty should be stabilised for a sufficiently long period.....

Mr. Shankerlal.—You mean there should be no change in the duty for 10 or 15 years?

Dr. Matthai.—Supposing the revenue duty was converted to a protective duty and it was suggested that the duty should be continued without any alteration for 10 or 15 years then you would not object to that?

Mr. Shankerlal.—The situation is not so clear at present; the outside element is affecting the Indian position.

Dr. Matthai.—What do you mean by outside element?

Mr. Shankerlal.—Foreign sugar.

Dr. Matthai.—That is the whole problem!

Mr. Shankerlal.—By protection you mean to produce more sugar in India and keep the foreign sugar out?

Dr. Matthai.—Reduce the imports.

Mr. Shankerlal.—That is your intention while our intention is not to reduce the imports until India can supply its own sugar.

Mr. Rahimtoola.—Don't you think that in order to reach that position the industry must have sufficient protection to be able to build up during the temporary period until it is in a position to supply you the best sugar that you want?

Mr. Shankerlal.—Yes, if the Tariff Board can give protection for a certain period which is sufficiently long and guarantee that there will be no change during this period to enable the industry to develop. It is a good thing, but the problem is how much can India produce?

Mr. Rahimtoola.—Your point is that owing to the uncertainty of the duty at present, that is to say you are not certain whether the revenue duty is going to increase or decrease, no enterprise is forthcoming and no capital is invested. The policy of the Tariff Board is that if protection is to be granted they would recommend protection for a period of years which they consider necessary in order to stabilize the industry in India. You have no objection to that?

Mr. Shankerlal.—No.

President.—I take it that the position is that you do not object to protection as such but you join issue on the amount of protection. There are two ways of imposing duties; Government may impose a duty in order to get revenue entirely or it may impose a duty for the protection of the industry. In the latter case the duty is continued for a definite period of years while in the former case it varies according to Government's requirements. I gather that you would not object to a duty being imposed in order to protect the industry but you think that the duty should not at any rate be above the level of the present revenue duty?

Mr. Shankerlal.—The present level is too high.

Mr. Rahimtoola.—What the President said was that if the present duty was turned into a protective duty then you would for the sake of the development of the Sugar industry in India have no objection?

Mr. Shankerlal.—Even then I consider the present duty too high. There is no commodity which bears so much duty as sugar which is not a luxury article.

President.—If the duty was fixed at such a level for a period of years as to secure that the agriculturist got a fair return on his cane, would you object to that?

Mr. Shankerlal.—Instead of replying directly I would put it this way: is this duty meant for getting out of this crisis, that is to say this low price of Rs 8?

Mr. Rahimtoola.—Not that. It is for revenue purposes.

Mr. Shankerlal.—Let me put it this way. If you can produce sugar at say Rs. 5 how would that help you? If there is no duty then the market price will be Rs. 4 or 5. Then sugar can come even at Re. 1, so that if you want to help the industry you will have to give more duty, there will be more competition and it will come back to the same question.

Mr. Rahimtoola.—In order to bring about a price of Rs. 5 in India you have got to stabilize the industry. Industries cannot grow in a day or two, therefore in order to follow what other countries are doing, namely subsidies, bounties, duties and so on to protect their home markets, in order to do that you have got to build up your own industry in India and you cannot do so without a protective wall.

Mr. Shankerlal.—I would say that this suggestion comes too late.

Mr. Rahimtoola.—Better late than never!

President.—I am trying to get at the exact views of the Importers' Association. Am I to understand that the Association wishes the present duty on sugar to be completely abolished and that no protective duty should be introduced?

Mr. Shankerlal.—Not that.

President.—What is your proposal?

Mr. Shankerlal.—India is a vast country and the amount of sugar consumed in India is very large and to produce that amount it means a lot of money. I would therefore suggest that steps should be taken to see that mills are located in areas where there is sufficient cane and these areas should be developed to enable the mills to produce sugar of a better quality and when that sugar is consumed more and more foreign importation will gradually diminish.

President.—Let me see exactly what it is that your Association propose. I gather that they do not propose that there should be no protection at all?

Mr. Shankerlal.—We want protection for the Indian industry

President.—As regards the amount of protection; do you hold any definite views as to the amount of the duty which should be imposed for protecting the Sugar industry?

Mr. Shankerlal.—I have already suggested that some portion of the existing revenue duty should be earmarked or kept out for development. The market price is very low now. To-morrow it may go up, if it does it would be due to market speculation. What is required is that we should not only add to the production of sugar in India, but also protect the industry in the country from being killed by outside competition.

President.—Yes.

Mr. Shankerlal.—Of course we must first begin with agriculture. At present industry means Indian mills according to your standard. Excuse me if I am a little bit outspoken. If Indian mills are to be protected, the part concerning agriculture is killed. Of course we know and we have also heard from your proceedings that people are importing low quality sugar or molasses. Our mills are only refining that in the same way as some of the cotton mills are doing by importing foreign yarn. I want to see so far as possible that this sort of thing doesn't happen in future. If there is a thorough understanding between the Tariff Board and the Government, then whatever suggestions you may make, would be helpful to the industry.

Mr. Rahimtoola.—You would have no objection to a duty provided some amount is set aside out of that duty for the development of the industry in India from the agricultural point of view?

Mr. Shankerlal.—No.

President.—May I sum up the general results of the conversation? I understand that the view of your Association is that you would not object to such protective duty as is necessary to ensure first of all that the agriculturist obtains a fair price for his cane.

Mr. Shankerlal.—That is one thing.

President.—And the second point is that whatever duty is imposed, a certain sum shall be set aside for the development of cane and of the *gur* industry; further the white sugar industry should be developed so as to ensure an outlet for the increased production of cane resulting from the cultivation of improved varieties. Is that correct?

Mr. Shankarlal.—Yes. The third point is that when these things are done, we are opposed to any increase in the present duty.

President.—The third point is that these improvements should as far as possible be effected without any increase in the duty, is that correct?

Mr. Shankarlal.—Yes.

Dr. Matthai.—Supposing we found on investigation that the cost of fairly efficient factories in India was such that it was necessary that there should be a price for sugar in Calcutta of somewhere about Rs. 9, even then would you suggest that the duty should remain at the present level? For argument's sake let us suppose we accept your suggestion that the proceeds of the duty should be utilised for the development of the agricultural aspects of the sugar industry, but we find on an examination of the cost that a higher price than the present price is necessary for the Indian sugar would you still object to an increase in duty?

Mr. Shankarlal.—I would.

Dr. Matthai.—On what ground?

Mr. Shankarlal.—Because the duty affects the sugar which is imported at the ports. I don't think there are any mills at any of the ports. In no part of India where the import of foreign sugar is considerable, is there a sugar factory. No sugar factory is built on the river bed or seaside. I am hinting at a very different point

Dr. Matthai.—Your point really comes to this that in the areas immediately served by these big ports there are no Indian mills working.

Mr. Shankarlal.—Quite so.

Dr. Matthai.—Let me explain the position. We want to see that the grower of sugarcane gets a fair price for his cane and we assume that somewhere about 8 annas a maund is his fair price. Taking that price for cane we work out the cost of a factory situated up-country. We find on an examination that the price should be somewhere about Rs. 9-12. If sugar was sold in that area from Calcutta it would bear a freight of about 12 annas. Therefore if the price in Calcutta was Rs. 9 he would get Rs. 9-12 there. On that examination we suggest that the price in Calcutta should be Rs. 9. We are not therefore burdening the consumer of sugar in Calcutta to the extent that would be required on the basis merely of his price, wouldn't that be a satisfactory arrangement?

Mr. Shankarlal.—No, because the protection which that man would get would be contrary to the intentions of the Tariff Board. Why should they not buy sugar at Rs. 9 instead Rs. 9-12 as you now propose.

Mr. Rahimtoola.—How will that position come about?

Mr. Shankarlal.—The imports should be allowed to go on at the ports and development should be allowed at stations where development could take place without the ports being blocked up, not by putting on a higher duty but by keeping this present duty intact, and lessening the cost.

Mr. Rahimtoola.—Do I understand from your point that in order to bring about a state of affairs by which the ports in India should not be burdened to pay over and above what the fair selling price should be, the freight should be increased to put up the price?

Mr. Shankarlal.—It may be in any form, but on the contrary I would suggest that sugar from Cawnpore should be brought into Calcutta and sold.

Mr. Rahimtoola.—Your point is this: in order to get your Indian industry developed and in order that the ports should not be allowed easily to dump the foreign sugar in the interior markets you would be agreeable to an increase in

the freight rate—rather make it prohibitive than increase the import duty, is that correct?

Mr. Shankerlal.—I would suggest the reverse. The freight from Cawnpore to Calcutta should be reduced.

Mr. Rahimtoola.—If the freight is reduced then the importers would be able to sell in Cawnpore cheaper than what they are doing to-day.

Mr. Shankerlal.—Incoming and outgoing rates would be different. This lower rate would be applicable only to Indian sugar. Cawnpore mills get the advantage and not any other sugar or any other commodity which comes from Cawnpore to Calcutta.

Mr. Rahimtoola.—Isn't Cawnpore a very big selling market?

Mr. Shankerlal.—Yes. Does it not affect its own production?

Mr. Rahimtoola.—It does.

Mr. Shankerlal.—You are suggesting that I should agree to an increased rate from here to Cawnpore?

Mr. Rahimtoola.—Yes.

Mr. Shankerlal.—It happens that when the sugar is produced at Cawnpore and sold on the basis of the Java market price, nobody would buy. When the rates are higher, the Cawnpore mills cannot produce and sell at a profit whereas when the rates are lower they can. Therefore to meet that situation if you give some subsidy, Cawnpore can develop and produce more sugar which will be cheaper to Cawnpore but if it comes outward, it becomes dearer.

President.—What is your suggestion? How is this to be brought about? We are here to get your assistance.

Mr. Shankerlal.—Our suggestions are made from two points of view, one as an importer and the other as an Indian. We as importers object to an increase in the duty unless India can produce its own sugar. As Mr. Rahimtoola says it may be necessary to reach that stage; that is understood. It is common sense.

Mr. Rahimtoola.—I want you for the time being to forget that you are an importer, because the Tariff Board is sitting in the interests of the nation.

Mr. Shankerlal.—As a nationalist I would say that the sugar industry should be encouraged. Sugar should be so produced that India might have her own ships going out with sugar. All these very importers would then become exporters of sugar and we are looking for that day with your help.

Mr. Rahimtoola.—We want to know how that ideal condition is to be brought about. How is the present Importers' Association to be converted into an Exporters' Association?

Mr. Shankerlal.—We would simply become dealers of sugar. We are prepared to do that much.

President.—How is this to be brought about? Have you any suggestions?

Mr. Shankerlal.—Unless some big scheme is proposed and more money is invested, it is not possible to reach that condition. Mere changes in the present system would be simply helping somebody in some unknown corners.

President.—That is to say you attach a great deal of importance to steps being taken presumably by the Imperial Council of Agricultural Research to spend money on developing the sugar industry. That is your point?

Mr. Shankerlal.—Yes. By doing that, the imported sugar will go away.

President.—In the meantime?

Mr. Shankerlal.—Whatever you think should be done could be done. We don't object to that.

President.—For example take these Coimbatore improved canes. It takes generally about 7 years to produce an improved cane and spread it over any considerable area. In the meantime while that is being done, some protection should be afforded to the mill industry, is that correct?

Mr. Shankerlal.—You mean increased protection?

President.—I say some protection. I am trying to get your point of view

Mr. Rahimtoola.—At present there is no protective duty.

Mr. Price.—No.

Mr. Shankerlal.—We say if you want to protect the industry you protect it

Mr. Rahimtoola.—The revenue duty has simply given indirect protection?

Mr. Price.—That is true.

Mr. Rahimtoola.—At present we have not confined ourselves to any increase in duty. We are just asking you whether the present duty can be turned into a protective duty. I think that has been all along our line of argument.

Mr. Shankerlal.—Yes, in reply to that we say that the industry should be helped in the way we have outlined.

Dr. Matthai.—That is to say if the price required for the Indian industry for argument's sake is Rs. 9, you would give that partly by a duty of Rs. 6 and then if it wants an extra duty of Rs. 3, you take it out of the proceeds of the duty and give it in the shape of subsidy, and make it up to Rs. 9.

Mr. Shankerlal.—Whether it is possible or not I don't know. You will have to see it. If that is possible, please do that.

Dr. Matthai.—If you want the industry to be protected and at the same time you want the duty to be kept at the present level, the only way in which the thing can be arranged is by giving a subsidy out of the proceeds of the existing duty to make up whatever difference there is.

Mr. Shankerlal.—If you increase the duty, it would merely affect the imports. If less sugar is imported, it is a loss to Government and also no profit to the Sugar industry. When you get less sugar imported into the country, you get less money for giving subsidy to the industry. Instead of that imports can continue for the time being. We can also produce our sugar. We can get to saturation point first in India and then imports will stop. The conditions of the industry all over India will be flourishing as in Cuba.

President.—There is one point which you have raised and that is that in the past the sugar industry has not flourished under the duty. I think in regard to that the position has changed very considerably quite recently, because the new Coimbatore improved canes as you know give an increased yield of between 50 and 100 per cent. more cane.

Mr. Shankerlal.—Yes.

President.—As improved canes are introduced, presumably in the course of 10 years or so the price of cane will be less.

Mr. Shankerlal.—Java people have stopped exporting seeds.

President.—We know. I understand as a result of the discussion now that the Association is not definitely opposed to protection as such, but merely wishes to represent that the amount of protection should not be increased.

Mr. Price.—Yes.

President.—But they don't consider that these three conditions laid down by the Fiscal Commission are an actual bar to the grant of protection?

Mr. Price.—In this particular case?

President.—Yes. Let me put it this way. I gather from the reading of your representation that you are commenting on these conditions mainly with Java or Cuba in mind.

Mr. Price.—Yes.

President.—As you know Java produces about three million tons and Cuba about five million tons out of the total world production of 26 million tons. Obviously if there were free trade, the price would not be governed by the Java cost of production, but by the cost of production of that country on the margin of production. That is to say when considering whether India has natural advantages or not, we must compare the costs in India with the costs of production of beet sugar in Europe.

Mr. Price.—Yes.

President.—Which would be considerably higher than Java.

Mr. Price.—Yes.

President.—So that from that point of view it is probable that the Indian industry will fulfil all those conditions, because India has distinctly greater natural advantages for cane sugar than, for instance, England has for beet sugar.

Mr. Price.—Yes.

President.—I think I am right in saying that it has considerably greater natural advantages than Queensland which is one of the other sugar producing countries and whose cost of production is £23 per ton. Therefore I think it would perhaps be unfair to the Indian agriculturist if you take the very best country in the world and say that because he cannot produce his cane as cheaply as that country, the cane must be allowed to go out of cultivation. Do you see the point?

Mr. Price.—Yes, I see the point. In our last letter to you dated the 9th October 1930, we have dealt with the question you have raised now. This is what we have said—“It may be taken that compared with the foreign manufacturer the Indian manufacturer is at a disadvantage in most if not all of the points you mention”.

President.—You have mentioned particularly Java?

Mr. Price.—Yes.

President.—You know the conditions of cultivation in Java. I don't think that it would be fair to the Indian agriculturists, nor perhaps would it be desirable, that the Indian agriculturists should be in such a state of subservience to the factories as the agriculturists in Java are.

Mr. Price.—In Java they have to irrigate actually. Although Cuba is as efficient as Java, yet the latter country is much better fitted for the production of sugar.

President.—My point is rather this that it would be unfair to the Indian agriculturists to compare them with those of Java and Cuba.

Mr. Shankerlal.—What we mean is that Java will be the only source of disturbance to India.

President.—That is perfectly true.

Mr. Shankerlal.—Our aim should be—how to compete with Java.

President.—To that I quite agree. We should of course endeavour to emulate Java so far as possible.

Mr. Shankerlal.—Java's best market is India. The only country which will be affected by any development that may take place in the industry in India will be Java. Therefore Java will try to cut down her costs and dump her sugar in this country.

President.—But the point really is in actually seeing whether the industry technically fulfils the conditions laid down by the Fiscal Commission, that we should compare the sugarcane cultivation in India with the sugarcane cultivation in other countries rather than in Java or Cuba.

Mr. Shankerlal.—(Read).

President.—You would agree that the importation of raw sugar which is used for adulterating gur should be stopped?

Mr. Shankerlal.—That should not be allowed and I hope you would agree.

President.—Yes.

Mr. Shankerlal.—From the point of view of the industry, it should be stopped. That is common sense. Otherwise the local industry will be killed. By industry I mean the cultivation of sugarcane and the refining mills. The mills want cheaper outturn and cheaper raw materials. What happens at present is this. On the class of sugar we deal in there is a duty of Rs. 11 or 12 while this low grade sugar pays only Rs. 2. In Cutch and other places, this low grade sugar pays only an *ad valorem* duty of 7 per cent. Here we pay

Rs. 12. In the circumstances how are you going to give protection to *gur* or jaggery which is required by the mills when the mills can get this stuff from outside very cheap without any question of protection? On the contrary if the white sugar industry is protected by Government it is something like "allowed smuggling" or sugar production in Indian mills with foreign materials.

President.—You would agree that as regards inferior sugar *gur* and the classes of sugar which are used for making imitation *gur* the duty should be sufficiently high to stop their importation?

Mr Shankerlal.—Yes.

President.—Would your Association agree to that?

Mr. Shankerlal.—Yes. *Ipsa facto* your industry will develop then without protection.

Dr. Matthai.—Has any Java sugar corresponding to Indian *gur* been imported into Calcutta?

Mr Shankerlal.—Yes.

Dr Matthai.—Recently or last year?

Mr Shankerlal.—Between the time you began to enquire into the sugar industry and now. It has all gone to Cawnpore.

Dr. Matthai.—Have you any idea as to the price at which it was imported?

Mr. Shankerlal.—I cannot tell you because they won't tell us. One importer (Balkishen) got 2,000 to 3,000 tons and supplied the upcountry mills.

Dr. Matthai.—Could you tell us what quality of sugar it was?

Mr. Shankerlal.—8 to 16 Dutch Standard.

Dr. Matthai.—Therefore it was charged 25 per cent. *plus* Rs. 1-8?

Mr. Shankerlal.—Not on that basis. It was an *ad valorem* duty.

Dr Matthai.—I think you are wrong.

Mr. Shankerlal.—We pay a specific duty of Rs. 12 a bag on white sugar and Rs. 11 on brown sugar, while they pay very little.

Dr. Matthai.—Was the sugar classified by the Customs as above or below 8 Dutch Standard?

Mr. Shankerlal.—I do not know.

Dr. Matthai.—What we heard at some other ports was that this class of inferior sugar which corresponded to Indian *gur* was below 8 Dutch standard and was therefore charged a duty of 25 per cent. *plus* Rs. 1-8.

Mr. Shankerlal.—The factory people could tell you. If I tell you yes or no, it will only be my inference, whereas any information that they may give will be reliable.

Dr. Matthai.—Have you any information as to what it was used for?

Mr. Shankerlal.—It was refined into white sugar and sold in Cawnpore.

President.—Was this the consignment which we heard was sent to Lucknow?

Mr. Shankerlal.—It might have gone there. I know that the upcountry mills took it. I was asked whether I would take up this line of business, but I said 'no'.

Dr. Matthai.—What we heard in one case was that the importer claimed that this class of inferior sugar which he imported should be charged the duty applicable to molasses, *viz.*, 25 per cent. but the Customs people regarded it as sugar falling under 8 Dutch Standard and therefore charged 25 per cent. *plus* Rs. 1-8.

Mr. Shankerlal.—I do not know.

Dr. Matthai.—Would you be able to find it out for us?

Mr. Shankerlal.—Why should you not refer this matter to the Collector of Customs? If I go, I can get it, but my information will not be so authoritative.

Dr. Matthai—The advantage is this. If we received invoice prices from the Collector of Customs, we would have to keep them confidential, but in order to make out a case, it would be rather convenient from our point of view to publish the thing and if you give it to us, we can publish it.

Mr. Shankerlal.—If I get it, I will send it on to you. But you can also ask Mr Tar Muhammad to-morrow. I think that he will be able to give you the information. If you are not satisfied, please let me know and I shall supply you.

President.—Apart from this inferior grade sugar which is imported is there any Java *gur* imported as such and sold for eating?

Mr. Shankerlal—Yes, not only in Calcutta but all over India. In Cutch they pay only 7 per cent. *ad valorem*. Further, they levy the duty on the invoice price, whatever it may be. The price of white sugar is 8 guilders a bag. It means Rs. 9 which would be a very low price.

President.—Could you give us any details of any consignment of eating *gur* which has come from Java?

Mr. Shankerlal.—Yes.

President.—Would you mind looking up at your leisure and letting us know?

Mr. Shankerlal.—I don't mind at all.

Dr. Matthai.—Can you tell us whether there is any difference in price in Indian markets between Java white and Indian white sugar?

Mr. Shankerlal—No.

Dr. Matthai—There is no difference? That is to say, if you take the first quality of Indian made sugar and Java white, there is no difference in price, is there?

Mr. Shankerlal.—The Indian white sugar is not inferior to Java.

Dr. Matthai.—You say that the darker appearance is a factor operating to its detriment. I want to know whether it is reflected in a lower price for the Indian sugar.

Mr. Shankerlal.—On the contrary, many people, like Marwaris, who are very conservative pay for the Indian white sugar double the price of Java.

Dr. Matthai—Do you think that all classes of sugar made in Indian factories would command a sentimental preference?

Mr. Shankerlal.—At present they do.

Dr. Matthai.—Are you personally familiar with the way in which Indian sugar and Java white sugar are valued in the market?

Mr. Shankerlal.—Yes.

Dr. Matthai.—Are you personally aware?

Mr. Shankerlal.—Yes.

Dr. Matthai.—Am I right in suggesting that Java white fetches a price in excess of the Indian white by about 4 annas?

Mr. Shankerlal.—Yes, if there is no sentiment.

Dr. Matthai.—Leave alone sentiment.

Mr. Shankerlal.—Then, Java white is preferred to Indian made white sugar.

Dr. Matthai.—The preference you would put at 4 or 8 annas? What is your experience?

Mr. Shankerlal.—My experience is that Java sugar is preferred.

Dr. Matthai.—How much would you put the preference at? Would you put it at 8 annas?

Mr. Shankerlal.—I cannot say.

Dr. Matthai.—Generally speaking, there is a preference?

Mr. Shankerlal.—Yes, for Java sugar because the Indian sugar is not so clean.

Dr. Matthai.—At the same time you think in certain parts of the country there is a sentimental preference for Indian sugar?

Mr. Shankerlal.—Yes, they pay more for Indian made sugar.

Dr. Matthai.—That I suppose is gradually disappearing?

Mr. Shankerlal.—No.

Dr. Matthai.—There was a stronger sentimental preference for Indian made sugar five years ago than now?

Mr. Shankerlal.—I think that it exists more and more.

Dr. Matthai.—In the Calcutta market, does that exist?

Mr. Shankerlal.—All people who do not like to use anything foreign as far as possible and other conservative people like Marwaris would never use Java sugar. I have never seen any Marwari using foreign sugar.

Dr. Matthai.—How much would he pay for Indian sugar?

Mr. Shankerlal.—Sometimes as much as Rs. 20 when the Java sugar is only Rs 8

Dr. Matthai.—As much as Rs 20 for Indian sugar?

Mr. Shankerlal.—They have paid as much as Rs. 20 for the Indian sugar. Orthodox people and Marwaris will take that stuff only at any price. But in this also adulteration is going on and brown sugar is being imported and mixed here and sold as Indian sugar.

Dr. Matthai.—What is this preference based on?

Mr. Shankerlal.—It is due to the sentiment of the people. That has nothing to do with the question of helping the Indian industry. They purchase it because they think bone charcoal is used in refining foreign sugar.

President.—Coming to your reply to question 3 you give a statement of Java white sugar and beet sugar prices. Are these selling prices, that is to say do these prices include the duty?

Mr. Price.—Yes.

President.—You take landing charges and river dues at Rs. 175 for 100 tons?

Mr. Price.—Yes.

President.—That works out to somewhere about an anna a maund?

Mr. Price.—Yes.

President.—Is that all the charge under that heading? To get selling price in Calcutta you have got to add landing and clearing charges, you have got to add river dues, brokerage, wharfage and various items of that kind. Have you added all that in this price?

Mr. Price.—These prices I have given are for the actual rates at which business is done in the year.

President.—Can you give us an approximate estimate of the usual charges incurred for landing, clearing and all these incidental charges?

Mr. Price.—Yes.

President.—Then we will take river dues and landing charges at one anna per maund.

Mr. Shankerlal.—For one bag of sugar we have to pay 12 rupees duty and other charges we count as 4 annas a bag of 2 mds. 28 srs. Each bag contains 2 cwts. net.

President.—That is to say landing charges and river dues and clearing charges would be covered by an anna and a half a maund?

Mr. Price.—Yes.

President.—That does not include commission, does it?

Mr. Price.—No.

Mr. Shankerlal.—My opinion is that the expense per bag in Calcutta is 4 to 5 annas.

President.—Supposing we took 2 annas a maund for landing and clearing charges would it be outside the limit? It won't exceed 2 annas, would it?

Mr. Shankerlal.—No In Karachi it comes to As. 4-6, in Rangoon it comes to As. 8 to As. 9, in Madras it is As. 9.

President.—What is it in Bombay?

Mr. Shankerlal.—It comes to about 5 to 6 annas per bag.

President.—What is the usual rate of commission?

Mr. Price.—One per cent.

President.—How does that work out per maund?

Mr. Price.—Just under 4 annas a bag.

Mr. Shankerlal.—I pay 6 pies.

President.—That would be another anna.

Mr. Price.—Rather more than an anna per bag.

President.—Could we take commission, landing charges as 5 annas and miscellaneous charges 3 annas?

Mr. Price.—Yes. 3 annas would cover commission too.

Dr. Matthai.—That is to say 5 annas a bag plus 4 annas as commission, altogether 9 annas a bag.

Mr. Shankerlal.—That is too high in Calcutta.

Dr. Matthai.—6 annas to 7 annas?

Mr. Shankerlal.—It should not be more than 8 annas.

President.—That would be just As. 2-9 a maund?

Mr. Shankerlal.—Yes.

Mr. Rahimtoola.—You have stated in paragraph 2 of your letter of 15th July that "the duty on white sugar, i.e., Rs. 6 per cwt. does not so increase the price as to make it a burden upon the consumer and the Board must remember that such a state of affairs cannot hope to prevail much longer". Now I take it that view has been revised and that you are protesting against an increase over the existing duty

Mr. Price.—That is so.

Mr. Rahimtoola.—In the last paragraph of your letter of the 9th October 1930 you want to record your protest against any increase over the existing duty. That means that you are not now seriously laying stress on the point you made that the third condition laid down by the Fiscal Commission cannot be fulfilled?

Mr. Shankerlal.—We gave you this reply on the materials which we then had before us; subsequently our letter of the 9th October was written and that should stand.

Mr. Rahimtoola.—You have stated that you would not like to penalize the consumers in the towns because sugar which is made in the interior does not come up here owing to competition with the sugar which is imported into the ports. I want to know what is the percentage of the imported sugar you send into the interior and what is the consumption in the ports?

Mr. Shankerlal.—Local consumption would be about 10 to 20 per cent. in every port.

Mr. Rahimtoola.—Then about 80 per cent. goes into the interior?

Mr. Shankerlal.—Yes.

Mr. Rahimtoola.—Where do you export after you have got the sugar here?

Mr. Shankerlal.—We send it upcountry, Cawnpore and other places.

President.—You were saying that you import molasses.

Mr. Shankerlal.—I used to import and now I am handling the business of the Pure Cane Molasses Selling Company of India, Ltd., Messrs. Haji Shakoor Gunni whom I represent are their sole selling agents.

President.—What is the present price of molasses?

Mr. Shankerlal.—Rs. 2-6 per maund duty paid in bulk.

President.—Is that liquid molasses?

Mr. Shankerlal.—Yes

President.—What about hard molasses?

Mr. Shankerlal.—It sells at about Rs. 2-10 to Rs. 2-18 per maund.

President.—I suppose the price of both is in proportion?

Mr. Shankerlal.—It has to be in proportion. Now-a-days the importation of hard molasses has decreased owing to the increase in the import of bulk because the latter pays less duty.

Dr. Matthai.—Is the greater part now coming in bulk?

Mr. Shankerlal.—Mostly.

Dr. Matthai.—Rs. 2-6 includes the duty?

Mr. Shankerlal.—Yes. The Trust's import price ought to have been higher but owing to importation from outside last week it has been reduced: it may go up again.

Dr. Matthai.—Do the liquid molasses which fetch a price of Rs. 2-6 correspond to the molasses produced in Indian factories? That is to say if this is Rs. 2-6 per maund, would the molasses made in Indian factories also fetch Rs. 2-6 in Calcutta or is there any difference between the two?

Mr. Shankerlal.—Perhaps they will get more.

Dr. Matthai.—Or does the market consider that there is some difference between Java molasses and Indian molasses?

Mr. Shankerlal.—They prefer Indian molasses.

President.—Why is that?

Mr. Shankerlal.—As far as I know the idea is that there is more sugar left in the Indian molasses.

President.—Are they used for eating purposes?

Mr. Shankerlal.—Molasses is used for mixing with tobacco and for distillation.

President.—Which is the more important purpose for which it is used?

Mr. Shankerlal.—For mixing with tobacco. Distilleries are now taking mohua and owing to picketting and other things wine is less and less produced and we have lost the demand for molasses from the Nasik Distillery.

President.—What is the imported molasses used for?

Mr. Shankerlal.—For curing tobacco and for distillation.

Dr. Matthai.—Have you got offices in Java?

Mr. Shankerlal.—Yes.

Dr. Matthai.—If the price of liquid molasses here is Rs. 2-6 can you tell us approximately what the price would be f.o.b. Java?

Mr. Shankerlal.—About 10 guilders per ton.

Dr. Matthai.—This Rs. 2-6 here is the new price owing to competition?

Mr. Shankerlal.—Yes and therefore you must take Rs. 3. It has been reduced owing to competition and it may go up again.

Dr. Matthai.—How much of that is duty?

Mr. Shankerlal.—25 per cent. *ad valorem*.

Dr. Matthai.—That is about 12 annas a maund.

Mr. Shankerlal.—About that.

Dr. Matthai.—That gives you Rs. 2-4. How much do you take for landing charges and so on?

Mr. Shankerlal.—The same charge as for sugar.

Dr. Matthai.—As. 2: that gives you Rs. 2-2 as the c.i.f. price. What is the freight on molasses?

Mr. Shankerlal.—Rs. 10 per ton or about 6 to 7 annas a maund.

Dr. Matthai.—That gives you Rs. 1-11 f.o.b. Java.

President.—From the factory in Java to the boat?

Mr. Shankerlal.—Factory in Java sells at Rs. 10 per ton. They have sold it at Rs. 20 to Rs. 25 a ton, because of this competition in Java.

President.—Ordinarily, they sell at Rs. 10 a ton.

Mr. Shankerlal.—Yes. 89 guilders make Rs. 100.

President.—It comes to Re 1-1.

Mr. Shankerlal.—Yes.

President.—That would be Rs. 11 a ton.

Mr. Shankerlal.—Yes. That is the lowest available. It was sold this season at Rs. 22. Now there is no buyer and there is also this competition.

Dr. Matthai.—Is it a short ton?

Mr. Shankerlal.—20 cwts. ton.

President.—Would it be correct to take the Java price as varying between 8 annas and a rupee per maund?

Mr. Shankerlal.—More than that. The price had risen to Rs. 20—25 per ton because of competition.

President.—The price at the factory gate is somewhere between 8 annas and Re. 1 per maund. Would that be about right?

Mr. Shankerlal.—It ought to be that way, but it is not. Because of one buyer and of this competition they are selling at higher rates.

President.—What is the present price per maund? Would you increase it by 50 per cent.?

Mr. Shankerlal.—100 per cent. Rs. 2 would be a fair price.

Dr. Matthai.—You mean the factory is getting Rs. 2.

Mr. Shankerlal.—Yes. If you see the contract you will find that they have got very heavy prices.

Dr. Matthai.—You know the cable circulars that come from Pusa. In one of these circulars which we got yesterday there is a reference to a sale by V. J. P. of 5,000 tons of molasses at 6 florins.

Mr. Shankerlal.—That is sugar.

Dr. Matthai.—They say 8/9. Is that standard molasses?

Mr. Shankerlal.—Those are the Dutch Standards.

Dr. Matthai.—Would you consider 8/9 as ordinary quality of molasses?

Mr. Shankerlal.—Yes.

Dr. Matthai.—Is that liquid molasses?

Mr. Shankerlal.—No. This is the stuff to the importation of which I am objecting. This is also used for human consumption.

Dr. Matthai.—Is this 8 Dutch Standard?

Mr. Shankerlal.—Yes.

Dr. Matthai.—This is inferior sugar.

Mr. Shankerlal.—Yes. This is sold at 6 guilders.

Dr. Matthai.—Why do they call it molasses?

Mr. Shankerlal.—That is the name given by the Trust. It is a lower grade sugar.

Dr. Matthai.—Their molasses only contain 30 per cent. sugar.

Mr. Shankerlal.—When we took the contract of their molasses, they guaranteed 65 per cent. It was taken to a chemist and on analysis it was found to be less.

Dr. Matthai.—How much less?

Mr. Shankerlal.—10 per cent. less. They store it in the tank and they pump it there and again pump it here. It was believed that too much pumping caused burning of the sugar.

President.—You say that some factories get Rs. 2 a maund for their molasses?

Mr. Shankerlal.—Yes.

President.—That is a very unusual price.

Mr. Shankerlal.—Yes because of the boom.

President.—You think that Rs. 1-8 would be a fair price to take for molasses for a period of years?

Mr. Shankerlal.—Yes.

Dr. Matthai.—This 8/9 Dutch Standard is inferior sugar and not molasses?

Mr. Shankerlal.—Yes.

Mr. Rahimtoola.—Your point is that it should not be named as molasses?

Mr. Shankerlal.—Yes. The Tariff Act is faulty there, because molasses are charged *ad valorem* duty.

Dr. Matthai.—Supposing an agreement was arrived at between Cuban, European and Javanese interests as a result of the conference in Brussels, as an experienced importer what do you think would be the result of it?

Mr. Shankerlal.—We have not much to fear.

Dr. Matthai.—At present the price in Calcutta is about Rs. 8-2.

Mr. Shankerlal.—It was. Since this rumour has come, the price has gone up.

Dr. Matthai.—There is an upward tendency.

Mr. Shankerlal.—Yes. We are below parity and yesterday we could sell at Rs. 8-3 or Rs. 8-4.

Dr. Matthai.—The mere holding of the conference has had a slight stiffening effect on the market?

Mr. Shankerlal.—Yes.

Dr. Matthai.—Supposing the conference succeeds in arriving at an agreed solution of the restriction problem, then what do you imagine would be the effect of that on prices here?

Mr. Shankerlal.—If speculators come in, then they will take the market upward, but they will also be more careful, because the sugar is still there. They all know that if the price goes up, they will bring it down again by releasing the sugar held in stock. Even if the Tariff Board guarantees protection for a period of 10 or 20 years, we won't put our money into the Sugar Industry, because we fear another Tariff Board might come and say "prices are good and the duty may be changed. Where is our safety then?"

Dr. Matthai.—Supposing the scheme was based on the idea of segregating a certain quantity of the present sugar crop, then your suggestion is that the segregated quantity would be there?

Mr. Shankerlal.—Yes.

Dr. Matthai.—And might at any time be used for bringing down prices assuming prices reached too high a level?

Mr. Shankerlal.—I think so.

Dr. Matthai.—In any case you think the effect of that might be a rise in price?

Mr. Shankerlal.—No further decline in price.

Dr. Matthai.—At what price do you expect sugar to stand assuming that the restriction scheme goes through?

Mr. Shankerlal.—Between Rs 8-8 and Rs. 9 under existing circumstances.

Mr. Rahimtoola.—It will never be below Rs 8.

Mr. Shankerlal.—It should not be. Sugar was sold at Rs. 7-14. That was due to speculation.

Mr. Rahimtoola.—Under normal conditions sugar would not be sold below Rs. 8^p

Mr. Shankerlal.—No, not under the existing conditions of the world and the world situation. If the conference fails, it might go down to even Rs. 7.

Dr. Matthai.—We might take somewhere about Rs. 8-8 as the normal minimum price if the restriction scheme is agreed to?

Mr. Shankerlal.—Yes.

Dr. Matthai.—Generally I suppose in our market prices begin to decline a bit from October when the beet sugar comes on the market?

Mr. Shankerlal.—Beet sugar comes in almost at the end of the season.

Dr. Matthai.—Beet sugar generally comes in at the end of September?

Mr. Price.—In December it arrives here.

Mr. Shankerlal.—Up till now there have been small imports of beet sugar into Karachi.

Dr. Matthai.—I notice from the trade returns in 1927-28 and 1928-29 there was hardly any imports of beet sugar into India, but in 1929-30 there was a sudden sharp increase.

Mr. Shankerlal.—That was because Java prices were maintained by the Trust. But that very Trust which was selling at 14 guilders is now selling at 8 guilders.

Mr. Price.—Circumstances were very different then. This year they will probably have 400,000 tons left over at the end of the season. So they have got to stop the importation of European sugar. Last year they knew they would not have any excess. While their sales were going on satisfactorily there was no point in reducing the rates.

Dr. Matthai.—This year it is far too soon to say what the beet imports are going to be as compared with last year?

Mr. Price.—They are not likely to be big.

Mr. Shankerlal.—Firstly owing to the present movement, we can't sell it in the market. Secondly the prices even on the Continent are not so low as those in India. Thirdly the distance from Europe to India is much greater than the distance from Java. Furthermore beet sugar cannot keep for a long time, while Java cane sugar can keep for a much longer period.

President.—Does not beet sugar keep?

Mr. Price.—It gets black. It smells badly. Therefore the experience of the importers is bad.

Dr. Matthai.—What is the chief defect?

Mr. Price.—It smells. When the monsoon comes it melts. Cane sugar keeps longer, because grains are stronger.

Dr. Matthai.—Can cane sugar keep for a year?

Mr. Shankerlal.—More than that.

Dr. Matthai.—How long?

Mr. Shankerlal.—4 or 5 years, but it has not been found necessary to keep it so long. Generally we can keep cane sugar much longer than beet sugar.

Dr. Matthai.—Can you keep it for 5 years?

Mr. Shankerlal.—They say that they can.

Mr. Price.—There has never been any occasion to keep it so long in the past.

Dr. Matthai —I am simply trying to understand the difference in quality between cane and beet sugar.

Mr Shankerlal —We keep it here more than a year.

Dr. Matthai —I find the essential part of the restriction scheme is that Cuba should segregate over a million and a half tons and Java a little more than a million tons. What I want to know is would these supplies be precipitated on the market or if it came to that could they keep it for a period of 4 or 5 years?

Mr. Price.—There would not be any necessity, because they are still growing a new crop. Java hopes to get 7 lakhs of tons from the new crop and can easily ship that.

Mr. Shankerlal.—As a rule they can keep cane sugar for a longer period than beet sugar.

President.—Under this restriction scheme you say that you anticipate some increase in price if it goes through. Would not the Russian 5-year programme upset the restriction scheme?

Mr. Price.—That is a doubtful factor. If Russia is successful with her 5-year scheme, it might possibly have an effect because Russia is not represented at the conference.

President —It is quite possible that in 3 years time there might be no appreciable rise in the price of sugar.

Mr. Price.—This year Russia is supposed to be producing nearly 2 million tons of sugar, but I very much doubt whether she can produce that.

President.—Still it would have a disturbing effect on the price?

Mr. Price.—Yes.

Mr. Shankerlal.—Therefore the Commission which they are going to propose would deal with such questions as statistics, restriction, and price and their international effects. Those things are on the agenda.

Mr. Price.—My point is that Russia cannot go on increasing. Supposing this year they have got something short of 2 million tons, that is the maximum they can produce the same as their wheat. I don't think they are capable of exporting or producing more wheat than they have done in a certain period before the war.

President —But the fact that Russia can produce and put on the market 2 million tons might affect prices?

Mr. Price.—Russia has always been a disturbing factor.

President —It might have a tendency to keep down the price. We don't know what policy Russia may pursue. They may produce 2 million tons and sell it at a low price.

Mr Shankerlal —All the European countries have done that and so we do not fear European competition so much

Dr. Matthai —How do you understand this restriction scheme? Is the proposal to segregate a certain quantity of this year's crop and then later on by successive reductions?

Mr. Price.—Yes as they sell at favourable prices. I gather when the market is steady, there is no fear of buyers selling it.

Dr. Matthai —Without depressing the market?

Mr. Price.—Yes.

Dr. Matthai —Does the restriction scheme involve a gradual reduction of the sugar crop from year to year?

Mr. Price.—It does.

Mr. Shankerlal.—The question is whether restriction will be necessary in the matter of growing crops in the future and whether the segregation will be agreed to. Segregation I think is almost agreed upon, but the question of restricting the crop is not yet decided. That would be left to nature they say

President.—How long are the negotiations expected to last?

Mr. Shankerlal.—They will be finished this week. Yesterday we had a telegram that Java and Cuba had agreed, but of course they have to put it up to their respective Governments.

Dr. Matthai.—This telegram that you got yesterday was to the effect that the segregation part of the scheme had been agreed to?

Mr. Shankerlal.—First Cuba and then Java agreed. They were going to Brussels

Dr. Matthai.—There was no agreement as regards the restriction?

Mr. Price.—No.

Mr. Shankerlal.—That is a question between Java and Cuba. About this conference everything is secret.

Dr. Matthai.—Supposing they agreed to the segregation scheme, but they didn't accept the restriction scheme, next year you might have the whole problem again.

Mr. Shankerlal.—I don't think they would be so blind in the near future.

Dr. Matthai.—What is your own idea?

Mr. Shankerlal.—They would I think have the question of restriction simultaneously settled. The only way for any failure of the Conference would be this. If the question is settled only with the object of taking out the Bankers' money from Cuban mills, then everything fails next year because they won't invest money again. *Ipsa facto* Cuba will produce less and consequently some factories will have to be closed down.

Dr. Matthai.—You mean one effect of the segregation scheme would be to produce a tendency among farmers next year to put less land under crop?

Mr. Shankerlal.—Yes, to get a better price. If they get a better price, they can maintain mills and produce. If they do not produce, they do not refine. If they do not refine, there is much less burden on the market. Then, it would induce somebody to come into the field again.

Dr. Matthai.—There would be a better chance of the whole thing being put on a regular basis?

Mr. Shankerlal.—Yes. Our present scheme might be well based on those inferences

President.—This Brussels Conference scheme might have a bearing on our enquiry. Do you think that it is likely that in the course of the next two months the question will be decided one way or the other and that it would be possible to have definite information which would be reflected in the price?

Mr. Shankerlal.—Yes. If you save the importers to-day, you would be saving the industry to-morrow. We are only sugar merchants. We will deal in whatever sugar we may get. We are merely sugar dealers. Your part is to supply us with sugar. If it is Indian, so much the better.

Mr. Rahintoola.—Do I understand that whatever proposals we might make you want that they should, as far as possible, be embodied in this year's budget in order to save the industry?

Mr. Shankerlal.—Yes, as early as possible

MR. WALCHAND HIRACHAND.

Oral Evidence of Mr. WALCHAND HIRACHAND recorded at Bombay on Thursday, the 4th September, 1930.

President.—Mr. Walchand, we understand your figures in your representation are approximate only and so it is really more on the general aspects of the case we want to examine you at any rate at this stage.

Mr. Walchand.—Yes.

President.—How many acres of cane have you?

Mr. Walchand.—I have got 60 acres of cane this year.

President.—What is the total area of your farm?

Mr. Walchand.—1,800 acres out of which about 700 acres are irrigated.

President.—And the average area is about 60 acres?

Mr. Walchand.—No, not average. We are now beginning to increase. Next year we propose to increase it to 100 acres.

Dr. Matthai.—Is the whole of the farm supposed to be under sugarcane?

Mr. Walchand.—Out of 1,800 acres I have got 60 acres under sugarcane this year.

Dr. Matthai.—You have never had a larger area in the farm under sugarcane?

Mr. Walchand.—No.

President.—In the maip you grow the local pundia cane?

Mr. Walchand.—Yes.

President.—You have some experience of the Coimbatore cane?

Mr. Walchand.—Yes. S. 48, H. M. 544 and a little of Co 213.

President.—Have you grown the Coimbatore canes for any length of time?

Mr. Walchand.—Not much. We have had some experiments last year and we have some this year.

President.—So you cannot tell us whether the cane tends to deteriorate after they have been grown for some time.

Mr. Walchand.—Our experience is mainly restricted to pundia.

Dr. Matthai.—Have you ever had experience of making *gur* out of Co. 213?

Mr. Walchand.—Personally I can't say much. We had a very small plot, but I am not able to give you any figures regarding outturn.

Dr. Matthai.—Anyhow your experience has not been large enough for you to draw any kind of conclusion?

Mr. Walchand.—Quite.

President.—I understand from your statement of *gur* making costs that so far as the growing of cane is concerned, the chief expenditure is incurred first of all on manure, then on seed and on irrigation. Those are the three most important items?

Mr. Walchand.—Yes.

President.—On manure I see you have Rs 155 an acre.

Mr. Walchand.—Yes.

President.—In your application of manure have you been advised by the Agricultural Department at all?

Mr. Walchand.—Lately we have heard reports that they have been experimenting at Manjri and reducing both water and manure, but we have not tried to follow them so far.

President.—I daresay you remember in the Sugar Committee's Report that one of the facts to which they drew attention was that in the Deccan area the manuring extended beyond the point which was profitable. I was wondering whether on this question of manuring you were taking any advice from the Agricultural Department. We received from the Agricultural Department the cost of manuring in the Hadapsar Farm. You probably know more about the farm than I do. They gave a cost of about Rs. 105 per acre.

Mr. Walchand.—As against mine of Rs. 155.

President.—They vary their manure. For instance you have 200 lbs. of ammonium sulphate and they have 250 lbs. Then you have groundnut cake, Rs. 70 per ton. How many tons is it?

Mr. Walchand.—One ton.

President.—They have 635 lbs. of groundnut cake. They have castor cake of 1,250 lbs.

Mr. Walchand.—It is a little more than three-fourths of a ton.

President.—You have farmyard manure over and above that which really accounts for the difference in cost. How do you get your farmyard manure?

Mr. Walchand.—Our own cattle and we buy locally. Three years back we had the whole of the Malegaon Municipal contract. We found it very costly. It was 12 miles away and the cartage cost alone came to about Rs. 2.

President.—What is your system of agriculture? Have you followed the Manjri system?

Mr. Walchand.—When you just now said about the Agricultural Department advising, the difficulty is that they have not got sufficient funds even for the travelling allowance. They are very anxious to visit our farm and give us advice. They say in the first month or two the whole of the grant under travelling allowance is expended. The grant is so small that they cannot advise the agriculturists by going round the farms.

Dr. Matthai.—That is the object of your proposal with regard to private demonstration?

Mr. Walchand.—Yes.

Dr. Matthai.—Private farms being used by Government as demonstration farms on the basis of a subsidy?

Mr. Walchand.—Yes.

President.—You would like the Government of India to make a special subsidy for this purpose?

Dr. Matthai.—How long have you had experience of growing sugarcane in these parts?

Mr. Walchand.—6 years.

Dr. Matthai.—During those six years I take it that there has been considerable reduction in the cost of manure per acre in your farm.

Mr. Walchand.—Yes.

President.—I take it from the text of your letter that probably the whole of the reduction in cost is due to fall in the price of manure.

Mr. Walchand.—Yes.

President.—Has there been any considerable decline in expenditure due to the use of less manure?

Mr. Walchand.—I think we have also reduced the quantity. We used $1\frac{1}{2}$ tons of groundnut cake and we have come down to one ton.

Dr. Matthai.—Have you got a person with agricultural training?

Mr. Walchand.—No, we started with an Agricultural Graduate, but we were not very happy. I had two men for 15 years or so doing agriculture on their own particularly sugarcane and these are the practical men (one from Sholapur District) who are in charge. We keep in close touch with Manjri and the Agricultural Department.

Dr. Matthai.—If ultimately it would be possible to reduce the manuring cost per acre from your figure of Rs. 155 to about Rs. 100, that of course might mean quite a considerable reduction in the cost of sugarcane.

Mr. Walchand.—Yes and the consequential cost in water. There would be less of water. I am told by the experts that if we use more water, more manure is required.

Dr. Matthai.—Have you any idea as to the quantity of water that you use as compared, say, with the Government farm? There is a suggestion both in the letter that we have got from the Director of Agriculture and in the Sugar Committee's report that private agriculturists are inclined to use a little more water than is really necessary. I think the proportion the Sugar Committee gives is 84" for the private Agriculturist as compared with 68" on the Manjri farm. Supposing the contention of the Manjri farm is right, that a reduction of 2/8ths is possible, that might also mean a fairly considerable reduction in the cost?

Mr. Walchand.—Yes.

Dr. Matthai.—That is to say if your figure comes to Rs. 65, out of that I take it the water rate is Rs. 42.

Mr. Walchand.—The water rate is Rs. 42 plus Rs. 10.

President.—What is plus Rs. 10 exactly?

Mr. Walchand.—They begin from February 15th and calculate for 12 months. We give a longer time and additional two waterings. If we begin at the end of December, we have to provide for two additional waterings, on an average in December or in January.

Dr. Matthai.—Would you suggest that water rates were too high?

Mr. Walchand.—That is rather difficult to say. When the Agricultural Department or the Bombay Government say that they are earning only 3 per cent we can't say that. The other comparison is as compared to United Provinces or Bihar, our rate may be higher, but we take so many times more of watering per acre. For United Provinces and Bihar the rate varies from Rs. 12 to Rs. 18. But then their watering is only one third of ours, because of the superior soil, silt of the Ganges and the Jamuna Delta.

President.—Exactly what is the irrigation rate here? Is it an acreage rate or what?

Mr. Walchand.—Acreage rate.

President.—So much for each watering?

Mr. Walchand.—For the sugarcane crop which begins from February 15th the rate is Rs. 42 per acre, and it means a turn every tenth day. As a special case they have allowed me a turn every seventh or eighth day, because we submitted that our soil was very light, a little sandy and more pervious than they have in other areas.

President.—Supposing you were to use less water, would they reduce the rate?

Mr. Walchand.—I don't know. I think they should, because their water will go a longer way, irrigate a bigger acreage.

President.—Would they reduce it?

Mr. Walchand.—I don't know. It is up to the Bombay Government.

Dr. Matthai.—May we take it that as far as the water cost is concerned, any reduction in the future must arise from reduction in the quantity of water, that is to say you don't make any suggestion that the present rates are too high?

Mr. Walchand.—That is very difficult for me to say. I would like reduction in every item. I would want the Government to give me water free.

Dr. Matthai.—Taking a reasonable view of the situation, the water rates, as they are, cannot be reduced. Therefore the only direction in which we can look for reduction is reduction in the quantity of water.

Mr. Walchand.—These canals were constructed as protective canals and Government should not therefore and were prepared not to expect any return from these canals. It is admitted everywhere that these are protective canals and therefore no revenue is expected. They must consider themselves lucky if they are getting this 3 per cent. Fortunately there have been no famines and if they care to reduce that 3 per cent. to 2 per cent. even the 2 per cent. is good additional income to them as compared with the original idea—then my cost of production of sugarcane at once becomes reduced by 5 per cent.

President.—May I take it that your position as regards the irrigation charges is this that the canals are constructed as protective irrigation works, and that owing to the operation of these canals the areas formerly affected by famines are not affected now?

Mr. Walchand.—I won't give that as the reason. Somehow the result has been that the canals were constructed as protective.

President.—For this reason or some other reason at present when famines occur, they are not so severe as they used to be in the past and therefore Government saves a considerable expenditure from their famine insurance fund and to the extent to which these canals contributed to the reduction in famine expenditure, that may be considered as the return which they are receiving from the canals.

Mr. Walchand.—They have sunk 8 crores. 3 per cent. on Rs. 8 crores is Rs. 24 lakhs which is their earning instead of zero with which they started. If they reduce their earnings from Rs. 24 lakhs to Rs. 16 lakhs, this Rs. 8 lakhs subsidy or relief to the agriculturist will go to reduce the cost of production by 5 per cent.

Dr. Matthai.—On this question of seed, that is another of your more important items. It comes to Rs. 60, excluding planting.

Mr. Walchand.—Yes. Planting comes as the first item in my costs.

Dr. Matthai.—The price of seed has come down in recent years, as you point out, because if the price of sugar and *gur* falls, the price of sugarcane falls too and therefore the price of seed falls.

Mr. Walchand.—Yes.

Dr. Matthai.—Supposing we decide to recommend protection and the price of *gur*, let us say, goes up, then I expect that there would be a corresponding rise in the cost of seed.

Mr. Walchand.—Yes. Whether I buy it or whether I make a book entry, it does to that extent.

President.—How much seed do you use—I mean how many setts do you use?

Mr. Walchand.—Personally I have no idea.

President.—I see that the Agricultural Department use 7,500 setts for which they charge about Rs. 50 at Rs. 6 per 1,000.

Mr. Walchand.—Is it the Effluent Department or the Agricultural Department? I do not know exactly how much the Agricultural Department use. I think they are using 10,000 setts. When I met Rao Bahadur Venkatraman in Poona last month, he told me that he used more in the case of some particular variety and overlapped them. We don't overlap. I forget whether it was Co. 290 or 213, but I remember he said that for some particular reason it was better to overlap.

Dr. Matthai.—Taking your aggregate costs including the cost of *gur* making which come to Rs. 535, it roughly works out to Rs. 7 per maund?

Mr. Walchand.—Yes.

Dr. Matthai.—This cost of Rs. 535 which you give does not, I think, include any of the capital charges.

Mr. Walchand.—No.

Dr. Matthai.—None at all?

Mr. Walchand.—None at all.

Dr. Matthai.—What you give as overhead is simply supervision?

Mr. Walchand.—Yes.

Dr. Matthai.—Can you give us some idea of the capital expenditure, that is to say, taking an acre of sugarcane at about 7,000 lbs. of *gur*, what approximately will be the capital expenditure?

Mr. Walchand.—Do you mean the cost of land?

Dr. Matthai.—There are various items. First of all, you have got your *gur* plant.

Mr. Walchand.—I have attempted to give a figure for the *gur* plant.

Dr. Matthai.—You give Rs. 6,000.

Mr. Walchand.—Yes.

Dr. Matthai.—Then, you have bullocks, ploughs and things of that kind. You have land, a certain amount of working capital and so on. I am trying to see what would be the fair commercial cost of *gur*. We can work out the arithmetic ourselves if you can tell us the items. You have given us the cost of *gur* plant as Rs. 6,000 including the cost of housing.

Mr. Walchand.—Yes, including the cost of a temporary structure.

President.—That *gur* plant would be able to deal with how many acres?

Mr. Walchand.—25 acres.

President.—You would have to have a separate plant for each 25 acres?

Mr. Walchand.—Yes.

Dr. Matthai.—If you were working for 60 days, at 2½ tons a day, we may take it that the output of the plant would be 150 tons.

Mr. Walchand.—Roughly half an acre a day is the present capacity of that plant.

Dr. Matthai.—Then, it does not work out to 150 tons. Assuming you get 3 tons of *gur* per acre, for half an acre you get 1½ tons. For 60 days, it is about 90 tons. Roughly you may say that the capacity of the plant is about 100 tons.

Mr. Walchand.—When you take 60 working days you will have to allow for bazar days—two or three days per month for Sundays and holidays.

Dr. Matthai.—Do you mean that it would be 55 days?

Mr. Walchand.—If you take 60 working days it comes to about 75 gross days.

Dr. Matthai.—We are concerned only with working days. Taking the season of the year at 60 working days, it comes to about 100 tons?

Mr. Walchand.—Yes.

Dr. Matthai.—What do you estimate as the capital required for the agricultural part? Take your farm of 60 acres.

Mr. Walchand.—Do you mean the cost of land?

Dr. Matthai.—Not the cost of land—the cost of bullocks, ploughs and things of that kind?

Mr. Walchand.—You have to take 240 acres.

Dr. Matthai.—Take 240 acres.

Mr. Walchand.—It will be as follows.—

Tractors, ploughs and other accessories I am taking only one tractor.
In case of any breakdown, there will be no stand by—

	Rs.
Tractor	2,500
Ploughs, etc.	2,500
10 pairs of bullocks	3,000
Housing of bullocks and of staff (primitive sort of housing)	1,000

Dr. Matthai.—Shall we take it at Rs. 9,000?

Mr. Walchand.—Yes.

President.—That is for 60 acres?

Mr. Walchand.—No, for 240 acres.

President.—This will have to be divided by 60 to get the acreage cost?

Mr. Walchand.—Yes.

Dr. Matthai.—Your farm is in the Deccan canal area?

Mr. Walchand.—Yes.

Dr. Matthai.—What is the cost of the land?

Mr. Walchand.—It varies so much and varies for various reasons and for various factors including the realisation of *gur*, profit made in *gur* making and so on.

Dr. Matthai.—Approximately what is the cost?

Mr. Walchand.—You mean the fully developed land?

Dr. Matthai.—Yes.

Mr. Walchand.—And not virgin land?

Dr. Matthai.—No.

Mr. Walchand.—We may take it from about Rs. 300 to Rs. 800 per acre.

President.—Say Rs. 500 on an average?

Mr. Walchand.—Yes.

Dr. Matthai.—That is to say no further work is necessary on the land, except the usual preparation for cultivation?

Mr. Walchand.—That is right.

Dr. Matthai.—That is the state of the land?

Mr. Walchand.—Yes. No further levelling, reclamation or anything of the kind is required.

Dr. Matthai.—Then, we have to make some allowance for the working capital. If we took our usual estimate of four months turnover, probably it would not do. What is the method of selling *gur*? Generally within what time do you realise the money?

Mr. Walchand.—The agriculturist who is always needy and wants cash is anxious to sell as early as possible. The *gur* comes into the market from the middle of February to April. When he sends his *gur* to the market, he realises his money.

President.—For working capital per acre we have to take this cost which you have given here *plus* a certain amount for interest on the money invested.

Mr. Walchand.—You can take 7 months interest on this amount. It begins with zero in December and goes up to Rs. 585 in February of next year. Therefore it is 14 months. You can take the whole amount and allow interest for 7 months on the whole amount in addition to the interest on his investments on tractors, bullocks, cost of land, etc.

Dr. Matthai.—If we make a separate allowance for all the fixed capital, that will cover it?

Mr. Walchand.—Yes.

Dr. Matthai.—On these figures Rs. 7 a maund is far short of the fair price.

Mr. Walchand.—Yes.

Dr. Matthai.—This is the current price, is it not?

Mr. Walchand.—Yes.

Dr. Matthai.—We have got a figure from the Director of Agriculture. I don't think he gives the latest price, but the price that he gives is Re. 8-10-0 in Poona at the end of 1929. Now, is this price of Rs. 7 *ex farm*, ...

Mr. Walchand.—No, in the nearest market place.

Dr. Matthai.—How many miles from your farm is the nearest market place?

Mr. Walchand.—Say 9 or 10 miles. Others also have got about the same distance. I don't think that they have to carry by bullock carts more than 8 to 10 miles.

Dr. Matthai.—If you take his figure of Rs. 8-10-0, then including depreciation, interest, etc., on the basis of the capital estimates that you have given, that figure might just cover it.

Mr. Walchand.—I do not know where that Rs. 8-10-0 is got from. Does he mention the locality? Is that the effluent price or the agricultural price?

President.—What is this Effluent Farm?

Mr. Walchand.—The Irrigation Department of the Bombay Government are carrying on various experiments in agriculture, soil, water, manuring and yields and they have got a farm which they call as Effluent Farm. They get the effluent of the drainage and sewerage from Poona, mix it with canal water and use it in the farm.

President.—Does the farm get additional manuring?

Mr. Walchand.—The total amount of nitrogen required is there in the effluent. As regards prices, I think all our sales last year had been at Rs. 21 or Rs. 22 per palla of about 250 lbs.

Dr. Matthai.—That is roughly about Rs. 7 per maund.

Mr. Walchand.—Yes.

Dr. Matthai.—How far is your nearest market from any of these places mentioned by the Director of Agriculture?

Mr. Walchand.—About 40 to 50 miles. The price shown against Ahmednagar, i.e., Kopergaon is Rs. 10-5-0.

Dr. Matthai.—Your market is about 50 miles from there?

Mr. Walchand.—Yes.

Dr. Matthai.—That would not account for that difference in price by any means

Mr. Walchand.—I don't think so. On the contrary my *gur* is sold in competition with Ahmednagar.

Dr. Matthai.—Where is your farm?

Mr. Walchand.—About 32 miles from Manmad Station. Kopergaon is about 22 miles from Manmad on the other side

Dr. Matthai.—Malegaon is a local market?

Mr. Walchand.—Malegaon is 12 miles from my farm. I have to stand competition with Kopergaon *gur*. In Kopergaon this Ahmednagar price should be less than Rs. 7 to be able to compete.

Dr. Matthai.—There are two things which are difficult to understand. The first is the big discrepancy in prices between what you give and what they give for most of the centres. The other is that during the past three years the price of *gur* seems to be rising.

President.—That was what we found in Madras too. The price of sugar was going down during the last three years but the price of *gur* was rising.

Dr. Matthai.—On the suggestion that you have made, viz., that the prices of *gur* more or less follow the prices of sugar, the figures they have given for the last three years are rather difficult to follow.

Mr. Walchand.—My graph is more or less a Government graph.

Dr. Matthai.—Here is a graph prepared by our Secretary on the figures supplied by the Department of Agriculture. Except when the prices of sugar went very high, we could not see any close resemblance.

Mr. Walchand.—The graph that I sent you is a copy of the graph which Mr. Burt supplied to the Sugar Committee last month. He will be able to tell you on what he has based his graph.

Dr. Matthai.—All these graphs that we have been supplied with are based on the prices of sugar and *gur* in big cities. Have you any kind of information as to what would be the position in villages where, I take it, *gur* does not come into competition with white sugar to the same extent? We examined various merchants and cultivators down in Coimbatore, which is rather a big sugarcane centre, and we got the impression from the evidence that they did not think that there was any close correspondence between the price of sugar and *gur*, but in Madras city apparently there is and therefore one suggestion that we are inclined to make tentatively is that probably in villages *gur* has its own price determined by supply and demand irrespective of the price of white sugar but that in the cities the two prices correspond.

Mr. Walchand.—I have said that.

Dr. Matthai.—Knowing village conditions as you do, do you think it is worth while to pursue the suggestion further?

Mr. Walchand.—It would be interesting if you go further into it as a study. But I think *gur* price in the villages will be mainly regulated by what the retailer buys it at and what profit he puts on it. The retailer will have bought his supplies from the market next door and he will put on his profit and retail it irrespective of the cost of sugar to him.

President.—The matter is of some importance not only from the point of view put forward by the Imperial Council of Agricultural Research that protection on sugar is justified in order to protect the *gur* industry, but also from this point of view that if it appears that in the upcountry portions of India apart from the towns the price of *gur* is to some extent at any rate independent of the price of sugar, it would also follow that whatever duty we put on imported sugar, it will have no effect or very slight effect on the price of *gur*. In that case since the poorest members of the community, who are the agriculturists, consume *gur*, it might be considered that an increase in the duty on white sugar would not really be a burden on the poor consumer. That is to say, the burden of the increased duty on sugar would be met by those who are best able to bear it and therefore from that point of view it is perhaps a matter of some importance.

Mr. Walchand.—Yes.

Dr. Matthai.—Pursuing that line of argument there is another point: supposing we find that this threatened importation of inferior sugar from Java is going to be continued, that might be a very serious matter, if we are to take really effective action against it, it may be necessary under certain conditions to levy a very high duty.

President.—For instance we might say that the duty on sugar of all kinds might be the same.

Mr. Walchand.—Yes.

Dr. Matthai.—In order to put an absolute stop to the possibility of *gur* coming in from Java we might levy the same duty on all classes of sugar. Now, if it can be maintained that that duty would not have a corresponding effect on the price of *gur* in the country it would be fairly easy to make out a case.

Mr. Walchand.—What you say is correct that a prohibitive duty on all sorts of sugar, even on imported *gur* which is Rs. 7-8-0, won't affect the consumer adversely because we produce almost all the *gur* that we require and local competition will not penalize the consumer at all.

President.—That is the point.

Dr. Matthai.—If we find that in rural areas it is local conditions that determine the price of *gur* and that the re-action of the price of imported sugar is very little, then the case for a fairly high duty can be effectively made out.

Mr. Walchand.—That means that these graphs which have tried to show that they are fairly parallel have to be scrapped!

Dr. Matthai.—All these graphs are based on city prices. It is a point that requires consideration.

President.—You would consider it profitable to pursue that line?

Mr. Walchand.—Yes. I am getting together the *gur* manufacturers at Manmad on Saturday. This is one of the two important areas. I am also developing the idea whether we can have a marketing organization to stop this unnecessary competition as the Cement people have done and in view of Sir George Schuster's speech yesterday I think that if we put up such a scheme he would consider it. There are only four or five centres in the Bombay Presidency and the amount involved is not big; the community has been well advanced and it should be easy to develop.

President.—It will be interesting if you have the *gur* merchants down with a view to obtaining an idea of their view on this aspect of the case, and if there is any fresh light thrown on it if you could communicate with us we would be very grateful.

Mr. Walchand.—I will let you know. As regards these prices given by the Director of Agriculture I would like to have some further information about these. Will the Bombay Government give you the same?

Dr. Matthai.—We are going to meet the Director of Agriculture and examine him on these points. What is the sort of suggestion you are making?

Mr. Walchand.—I am in touch with all these prices but I have never heard of these prices that they suggest and I should be happy if I could obtain this price of Rs. 10-5-0 that they suggest. I should like to know how they got these figures. At the same time from the Central Co-operative Bank who are doing an amount of business in *gur* centres we can call for some initial prices. They have got an organization at Baramati. They market a decent quantity of *gur* and they should be able to give us something that we can call initial prices when I see the Managing Director.

President.—That would be interesting.

Mr. Walchand.—Thus Rs. 10-5-0 for Ahmednagar, that is a big difference. Baramati is our prize place for *gur* and they put that down as Rs. 8-14-0 and Ahmednagar they put down as Rs. 10-5-0 a difference of Rs. 1-7-0! I don't understand this. It is worth pursuing further and I will try to get all the information I can get.

President.—Have you any knowledge of this alleged adulteration of *gur*? Some of the importers told us that imported sugar is used to adulterate *gur*.

Mr. Walchand.—I have no definite information, but I have heard of it. While on the question that we were just now discussing, I saw the National City Bank's Monthly Circular. They have got something very interesting as regards sugar while trying to discuss the general conditions. There the point I want to draw your attention to is that Italy which before the war produced only a part of her requirements now supplies them in full. The point there is that every country is trying to increase production to make itself self-contained at any cost as regards sugar. Then reference is made to countries like Japan and Formosa which from 157,000 long tons in 1913-14 have increased it to 930,000 tons. The most astounding thing is what is happening in the case of the 'Freetrader' Great Britain. Six years ago Great Britain had a measure for subsidising beet sugar. In the current year the subsidised factories have produced 300,000 tons of beet sugar at a cost to the public treasury of 25 million dollars. This works out to Rs. 212 per ton, cost to the Treasury alone for producing this 300,000 tons of sugar. This is what Great Britain is doing. Then the Circular goes on to say about Jamaica. The duty in the United States is about \$2-50 cents, say roughly Rs. 7-4-0.

Dr. Matthai.—About 2-65 cents.

Mr. Walchand—The rate for Cuba is 2 20 and for others I think it is 2 5. Cuba can produce its sugar at about 1½ dollar *ex* New York harbour. The price of unrefined sugar in New York Harbour before payment of duty is 1 25. So these other countries are taking what I may call these heroic measures and Great Britain is spending Rs. 212 a ton for beet sugar as cost to the Treasury alone.

Dr. Matthai.—In Great Britain it is more or less a war measure, which has survived the war.

Mr. Walchand.—It first began in 1924, five or six years after the war terminated.

Dr. Matthai.—It was a proposal made immediately after the war.

Mr. Walchand.—I say that India is an agriculturist country and should at any cost be made self-contained as regards sugar.

Dr. Matthai.—In the earlier representation that you sent us I take it the proposal you are making in para. 6 is an increase in the duty of Rs. 1-8-0?

Mr. Walchand.—Yes.

Dr. Matthai.—Before we can discuss that increase that you suggest it would be necessary for us to get the replies to the questionnaire from the manufacturers, but can you tell us the data on which you have based this Rs. 1-8-0?

Mr. Walchand.—I think I have said somewhere that Rs. 1-8-0 will give me

Dr. Matthai.—You are taking it on the basis of *gur*?

Mr. Walchand.—Yes.

Dr. Matthai.—That is to say at present it would be profitable for you to make your *gur* if you are able to get Rs. 8-8-0 instead of Rs. 7-8-0. On that basis you suggest Rs. 1-8-0?

Mr. Walchand.—Yes.

President.—In fact your proposal really is that imported sugar should not be sold at much less than Rs. 9-8 per maund *ex* port?

Mr. Walchand.—Yes.

President.—It is really somewhat lower than many of the manufacturers have asked for. They have suggested that it should be brought up to Rs. 10.

Mr. Walchand.—I have heard of one of Rs. 11 a maund!

Dr. Matthai.—Yours is a moderate suggestion.

Mr. Walchand.—I am basing it as an agriculturist. I will see later on if I can improve upon it.

Dr. Matthai.—That is a thing we have got to decide with reference to real figures later on. The really important thing is that you suggest a period of ten years. In the enquiries that we have done so far, the cases we have dealt with have all been pure manufacturing industries and the period of protection has been fixed generally at 7 years. Now, are you quite satisfied that protection for a period of 10 years would enable the Indian Sugar industry to hold its own?

Mr. Walchand.—Personally I think we will go a long way during that period. To ask for anything longer than that would be looking too far ahead—rather speculating about the future. But I think in ten years a large amount of work towards reconstruction will have been done, with research and various other things and even in the development of the small scale factories on the basis of what Khan Bahadur Hadi says.

Dr. Matthai.—As I look at it in the case of an industry which is in the main a manufacturing industry, if you grant protection, that is to say, if you give them a reasonable assurance that they will get a suitable market in the country, all that it has to do is to introduce wholesale developments that have taken place in that industry in other countries. If the output just-

fies it, you can incur all the overhead expenses necessary. The moment you guarantee the internal market it can go ahead.

Mr. Walchand.—Yes.

Dr. Matthai.—In the case of sugar, more than half the cost is the agricultural cost, that is the cost of sugarcane.

Mr. Walchand.—Almost two-thirds.

Dr. Matthai.—In the case of an agricultural industry you cannot straightway adopt all the methods of cultivation, which have been successful elsewhere. You cannot adopt them, because they may not work equally here. That requires prolonged investigation of local conditions before you can be sure that those methods of cultivation would be successful here.

Mr. Walchand.—Are you referring to the increased cost of production of sugarcane in the Bombay Presidency?

Dr. Matthai.—What I am suggesting is this: from such figures as I have seen, it looks to me that if ultimately the Indian Sugar industry is to hold its own with imported sugar, the big item in which reduction will have to be sought is the sugarcane cost.

Mr. Walchand.—Yes.

Dr. Matthai.—That is true not merely of Bombay but of every part of India. That is to say with regard to the actual factory costs they have already reached a fairly high standard of efficiency. The recovery percentage and other things are fairly high. The reduction of sugarcane cost is almost entirely a question of agricultural investigation.

Mr. Walchand.—Yes.

Dr. Matthai.—Agricultural investigation is not a thing which can be done to order. You will have to wait patiently for results.

President.—How long has the Coimbatore sugarcane experimental farm been in existence?

Mr. Walchand.—A little over 10 years.

President.—A considerable amount of work I gather from the Imperial Council of Agricultural Research remains to be done in the provinces in the way of conducting investigation after Coimbatore has produced the cane.

Mr. Walchand.—Yes.

President.—That of course, as you are aware, in times of financial stringency is not a matter which can be accomplished in a very short time.

Mr. Walchand.—I will reply to these points. My experience has been this: many of us have got for instance this 10,000 to 12,000 lbs. per acre. We have found next year or the year after next the same plot yielding 6,700 lbs. on an average. If you will come to our farm and go round what we call the prize plot, you will find that whilst on an average in the past it has been giving us 10,000 lbs., next year it is going to give only 6,000 or 7,000 lbs. We obviously see that there is something wrong with it and that it requires the Research Expert to say whether it is smut or borer or red-rot or something else or whether it is due to the change of variety or whether the manuring has something to do with it. That means research. I do not know whether it is a long range research or what they call basic or fundamental research. I may observe that Manjri farm has an average of 10,000 lbs for the last so many years.

Dr. Matthai.—That is about 4½ tons.

Mr. Walchand.—That makes the whole difference. The other costs are the same. The increase in the yield from 7,000 to 10,000 lbs. will give me that big reduction in cost that you expect. Leaving that alone for the moment, I am still spending Rs. 575 or Rs. 7 per maund. If the price is stabilised at about the modest figure of Rs. 9-12-0 or Rs. 10 as against Rs. 11 asked by other people, as far as I understand the factory cost comes only to Rs. 2-8-0 a cwt am I right there?

Dr. Matthai.—Assume that is so.

Mr. Walchand.—Then I am quite happy. If I am neither able to reduce my costs nor increase my yield—which means a reduction of cost—if my costs remain at Rs. 7, then I get this Rs. 2-8-0. My Rs. 7 includes the *gur* making cost. If that is my profit, I am quite happy. Do you see the point?

Dr. Matthai.—Your Rs. 7 is the works cost of making *gur* without any of the capital charges.

Mr. Walchand.—Quite so. The advantage I expect to get is Rs. 2-8-0 which will cover the whole of my sugar factory cost, leaving me to earn my profit. That profit is my *gur* making costs which is about Rs. 80 to Rs. 100 an acre.

Dr. Matthai.—What you are suggesting is that supposing the duty is put up by Rs. 1-8-0 or whatever the figure is, then it will be possible for you to make a fairly reasonable profit.

Mr. Walchand.—Yes, I may carry along.

Dr. Matthai.—That is not the real issue. If we are satisfied that there is a case for protection, then we have got to recommend an adequate rate of protective duty. The issue we are really considering is the period of protection. When you fix a particular period of protection, you base that on the assumption that at the end of the protective period, if the protective duty is removed or is reduced to the revenue level, then there is a reasonable chance that the Indian sugar industry would be able to hold its own. Otherwise the period of protection would have to be extended till the time when Indian Sugar industry could face world competition unaided.

Mr. Walchand.—When the whole of the duty is removed?

Dr. Matthai.—Or when the duty is reduced to the revenue level.

President.—When it is reduced to 15 per cent.

Dr. Matthai.—When it is reduced to Rs. 4-8-0 a cwt.

Mr. Walchand.—Since March the revenue duty is Rs. 6.

Dr. Matthai.—You cannot build on the revenue duty. It all depends on the exigencies of Government finance. Leaving alone these meticulous considerations it is a point that you have got to consider carefully whether in the case of an agricultural industry, an industry in which costs are mainly agricultural, a period of protection which is suitable in the case of ordinary manufacturing industries is equally suitable

Mr. Walchand.—True.

Dr. Matthai.—From the figures that we have received from sugar factories, it looks to me that a very considerable reduction in sugarcane costs would be required before we reach the stage of being able to face world competition. Take this question. In Java at present on an average they make about 5½ to 6 tons of white sugar per acre. You are making about 2½ tons in Bombay. You have a long way to travel.

Mr. Walchand.—That is why I said Rs. 25 lakhs a year for sugarcane research as against Rs. 10 lakhs they have given.

President.—I saw it stated in the course of budget discussion of last year that the amount was not increased, because they were already given as much as they could spend. That is not a correct statement of the position now. Has the position changed?

Mr. Walchand.—Do you mean it has worsened?

President.—No, the position has improved. The Imperial Council of Agricultural Research are now in a position to spend more than Rs 10 lakhs.

Mr. Walchand.—Punjab wants Rs. 4½ lakhs. Bombay has put up a scheme.

President.—Bombay has put up a scheme for Rs 8 lakhs.

Mr. Walchand.—Yes, the details have not yet been worked out. The Research is expected to do or should do a lot provided it is financed. Out

of the Rs. 10 crores duty, I want only Rs. 25 lakhs for research per year and the Government should make it a point to give it.

President—Your proposal for an increase of Rs. 1-8-0 per cwt. would mean an increase of Rs. 2 crores in revenue

Mr. Walchand.—Rs. 3 crores.

President.—Out of that you are only asking Rs 25 lakhs.

Mr. Walchand.—I had worked out the percentage on the whole of the duty. We are getting Rs. 10 lakhs on sugar and I want Rs. 25 lakhs only which is about 25 per cent. As regards the period of protection the industry being mainly agricultural I would like the time extended from 10 to 20 years.

Dr. Matthai.—It is for you to suggest a suitable period. You know more about the sugar industry than we do at this stage. If it is reasonably possible that the Sugar industry would be able to dispense with protection in ten years, you would be perfectly justified in sticking to 10 years, but that is a point you and possibly the Sugar Committee would have to consider.

Mr. Walchand.—The two or three reasons which weighed with me are these in the first place to look ahead beyond 10 years was looking too far ahead. Another reason is so far I don't remember to have seen any recommendations by the Tariff Board recommending protection for a period of more than 7 years.

President.—Of course it is the first agricultural industry that has been referred to us.

Mr. Walchand.—First of all fix it for 10 years and at the end of that period I should reconsider it.

Dr. Matthai.—If I were starting a sugar industry of my own I wonder whether I should be willing to undertake the necessary experiments, and investigations if I were allowed a period of only 10 years to do all that in.

Mr. Walchand.—Yes.

Dr. Matthai.—There is just another point I understand that your interest in this enquiry primarily is that of a grower of cane.

Mr. Walchand.—Yes.

Dr. Matthai.—And you therefore suggest that if a protective duty is granted, then it is necessary that the grower of sugarcane gets his share of the protection.

Mr. Walchand.—No. I don't think I was so shortsighted as that. Though I didn't mention it I was thinking of the small scale sugar factory. The present railway freight is high. I understand that it is Rs 1-8-0 from Calcutta to Cawnpore.

President.—It is Rs. 1-6-0 from Calcutta to Cawnpore.

Mr. Walchand.—Rs 1-12-0 from Bombay to Cawnpore and the cost of a factory ranges from Rs. 12 to Rs 17 lakhs which would be able to deal with 500 tons of cane a day. There is Hadi's process and there are also one or two other processes. In the Rohilkund and Kumaon Division they are doing it in the old fashioned style. There the railway freight is a big consideration. These small scale sugar refining plants should be developed even now. The Sugar Committee is conducting an intensive test of Khan Bahadur Hadi's plant. Last year small tests were made and various difficulties were encountered. The whole season's test is now being arranged and the Sugar Committee have sanctioned the money. In the District of Moradabad the whole season's tests will be taken. Manjri also had that done some years back, two or three years back. I think it should not be difficult to have that done particularly when we have got this additional duty and the advantage of the railway freight to that village. Then it will not be merely the interest of the sugarcane grower, but of sugar itself in that local area. All these small scale men having 100 or 200 can easily afford to have the Hadi's plant or something like it, make his own sugar and supply the wants of those who are within 100 or 200 miles radius.

Dr. Matthai.—Your suggestion is that if this additional protective duty is introduced, then it will be possible for that class of small scale sugar manufacturer to do his business fairly profitably.

Mr. Walchand.—Yes. Because of the additional Rs. 1-8-0, he cannot be as efficient as the 6,000 ton sugar factory man as regards extraction and other costs.

Dr. Matthai.—What does he do? Does he refine *gur*?

Mr. Walchand.—Yes.

Dr. Matthai.—That is Mr. Hadi's plant

Mr. Walchand.—Yes

Dr. Matthai.—According to our terms of reference we have to consider 3 aspects of the sugar enquiry. There is the white sugar, there is the *gur* and there is also the growing of sugarcane

Mr. Walchand.—Yes.

Dr. Matthai.—Supposing we protected the industry and gave an adequate protective duty, could we assume without making further provision that the grower of sugarcane would necessarily benefit?

Mr. Walchand.—On this Rs. 1-8-0?

Dr. Matthai.—Whatever protection we may give or however much we may increase the duty, can we generally assume that the grower of sugarcane will get correspondingly a better price for his sugarcane?

Mr. Walchand.—No. I think some restriction there will have to be placed. You are referring to the conditions in Bihar and United Provinces?

President.—Yes.

Mr. Walchand.—That condition has not arisen here. You must stop the factory owner from squeezing the sugarcane grower who will be always at his mercy.

President.—In those areas where there is no effective competition from *gur*

Mr. Walchand.—Yes and probably the sugarcane grower has no arrangements or discarded all his arrangements for *gur* making. There the factory owner can easily squeeze him.

President.—Have you any suggestions?

Mr. Walchand.—In one or two countries there is a sliding scale that the factory shall pay not less than so much to the sugarcane grower.

Dr. Matthai.—You can enforce a sliding scale where there is a licensing system because you can withdraw the license. It gives you a handle by which you can enforce it, but if you give protection by means of tariff the benefit of which will be derived by everybody who makes sugar in the country, you cannot differentiate. What I want to know is if you suggest a sliding scale what is the sanction for the enforcement of the sliding scale?

Mr. Walchand.—The necessary machinery will have to be evolved.

Dr. Matthai.—What kind of machinery?

Mr. Walchand.—Not the Central Marketing Board!

Dr. Matthai.—The Indian Sugar Committee suggested a sliding scale.

Mr. Walchand.—Yes.

Dr. Matthai.—I cannot gather from the Sugar Committee's report how exactly the sliding scale was to be given effect to.

Mr. Walchand.—In other countries—I forget whether it is in the West Indies or somewhere else—they have got a machinery but I have not studied its working

Dr. Matthai.—In Java, they have a licensing system and that gives Government a certain amount of control. The same applies to Formosa.

Mr. Walchand.—Can we not introduce the same here?

President—It will be very difficult because of a number of very small factories in India.

Mr. Walchand.—You need not worry about the small factories. The production of factories using the Hadi type of plant will be only about 600 tons and only such factories need be considered.

President.—Do you suggest that the factories coming within the Factories Act should be licensed?

Mr. Walchand.—No. They are now trying to bring even my sugarcane crusher under the Factories Act. I think that the Agricultural Department are taking up this question; so that will apply to the small man growing 25 acres of sugarcane. I think you will have to make it applicable to those who buy more than two-thirds of their cane from outside or more than half from outside.

President—Perhaps you would like to have some time to consider it. On thinking it over, if you have any suggestions to make, will you please communicate them to us?

Mr. Walchand.—Yes.

Dr. Matthai.—The problem arises only where the sugarcane grower has not the alternative of *gur*.

Mr. Walchand.—That is the case in the whole of the United Provinces and Bihar

Dr. Matthai—Yes Where that is utterly lacking, there is really no guarantee at all that the sugar grower will benefit by this tariff.

Mr. Walchand.—That is so. The Baramati factory on the Nira Canal area were entirely dependent on the sugarcane growers, and they based their price of sugarcane on the price of sugar. They had a sliding scale for payment to the surrounding sugarcane growers.

President—That was Sir Lalubhai Samaldas' concern?

Mr. Walchand—Yes I shall try to get a copy of the agreement and send it on to you. It will show you on what basis the price was paid

President—There is another aspect of the same or allied matter and that is this As you know in Java it is the factories that are really responsible for all the improvements in the sugarcane and organization. In India, the factories, provided they are prosperous, can play a great part in developing agriculture in their vicinity by seeing that suitable varieties of sugarcane are grown and proper manure applied. Possibly they can also make arrangements for the supply of manures at favourable terms and so on. Of course, as a condition precedent to that, sufficient protection will have to be given them to enable them to make a fairly generous scale of profit because these things cannot be done without spending money.

Mr. Walchand.—I would not leave it to the factories.

President.—In the event of the introduction of protection it might be necessary to make provision for the possibility of the imposition of some cess on sugar factories. For example if it appeared that sugar factories were making fairly satisfactory profits and if they did not pay sufficient attention to the interests of the sugarcane growers in their vicinity, then it might be necessary for Government to levy some cess to be devoted to that purpose.

Mr. Walchand.—You will be paying by one hand and taking it back by the other or you will be paying premium for inefficiency. They may say that they are not making anything. I say "give us some protection and also a proportion of the duty realised for research, for organisation and for the betterment of the conditions of the sugarcane grower".

President—Such a cess would only be introduced if Government were satisfied that the factories were not doing what one might almost call their duty

Mr. Walchand.—I would rather leave it to the Agricultural Department here. We have a very big area—something like 27 lakhs of acres. Of that, the sugarcane area will ultimately be only one-sixth. So, I would leave it to the Agricultural Department and not have the factories brought in.

President.—You would not recommend any provision being made to enable Government to levy a cess if it wishes to?

Mr. Walchand.—I would rather not because it would have to come in the first place from protection.

Dr. Matthai.—Supposing we find that on the present costs, the additional duty necessary to protect the industry is Rs. 1-8-0. If we contemplate a cess of 4 annas a maund, we will make the protective duty Rs. 1-12-0. Then, that difficulty is got over.

Mr. Walchand.—How are you well off then? Why not keep four annas with the Government who will be able to spend the money better than the factories.

President.—The only point is that the factories are in close touch with the agriculturists from whom they buy their canes.

Dr. Matthai.—We are not denying for a moment that the work done by a central organisation is of very great value. But if the work is to be really effective it must be based on close co-operation between the central organisation and the factories, and in order to keep the factories interested they must be made to pay.

Mr. Walchand.—Will not the factories prefer to do all that work round about their own centres?

President.—That is just exactly what we would wish.

Mr. Walchand.—Then, who will look after the other people who are not near any factory? The sugarcane growers round about a factory will have this advantage of factory organisation. What about the people who are beyond their radius—say in the Deccan Canal area where there is no factory. The general consumer will be paying this extra duty, but it will be spent round about the factory. The factory man, being human, will spend the whole of his energy round about the area which affects him.

Dr. Matthai.—Do you necessarily object to that? I should have thought in a matter like sugarcane that kind of localised investigation is what you want because conditions are so different.

President.—If a factory was successful and it proved that this method of devoting close attention to agriculture in the vicinity would not only benefit the agriculturist but also the factories, you will find more factories springing up which would be to the great benefit of the agriculturists.

Mr. Walchand.—Taking the present figures we want about 4 lakhs of additional acres. We have already got 27 lakhs under sugarcane. Without allowing for any natural increase—it may be 3 or 4 per cent.—in the general sugar consumption, we want to produce this 900,000 tons of sugar that we are importing. Roughly it means another 4 lakhs acres. The total will then be 31 lakhs of acres. Out of that, the factory owners will grow only about 4 lakhs round about them, and the remaining 27 lakhs will be left uncared for.

President.—Will not that result in the most suitable areas being developed?

Dr. Matthai.—This is merely an extension of your suggestion of subsidised private demonstration farms? The principle of the two things seems to me to be the same.

Mr. Walchand.—Government might say “here are the factory people doing everything. We have allowed the cess money for that purpose and therefore we need not do anything more”.

President.—The Imperial Council of Agricultural Research might combat an idea of that sort.

Dr. Matthai.—There will be a certain amount of control by the central organisation. But you will agree that it is necessary that the interest of the local manufacturer must be definitely enlisted in any scheme if it is to be really effective.

President.—The necessity for that will be realised better when one sees the results of the active interest taken by the Java factory owners

Mr. Walchand.—There is this difference between Java and India. In Java, all the sugarcane that is produced is converted into sugar, whereas in India only one-sixth of the sugarcane is to be converted into sugar and the other five-sixth into *gur*.

President.—Take your Deccan Canal area. Supposing you had factories there and they took an active interest and introduced suitable varieties, made experiments as to manure and also stocked manure for the cultivators to purchase, would not the effect of all that spread beyond the radius of those factories? Would not people say from a distance of 40 or 50 miles run down and see what is going on round about the factories?

Mr. Walchand.—Roughly about 2,000 is all that would interest a factory man. In Bombay we have 85,000 acres under sugarcane that means 40 factories. Of these 85,000 acres, 35,000 acres are in the canal area and the rest on well irrigation scattered all over a decent portion will remain unattended to or not interest the factory owners.

President.—Supposing a new kind of cane is introduced by the factory and has proved to be extremely satisfactory in the Deccan Canal area, don't you think that the idea will gradually spread?

Dr. Matthai.—Especially as a result of protection?

Mr. Walchand.—It will.

President.—We were interested in what we saw at Nellikuppam. There they have an area which is cultivated by themselves, and they also get a portion of their supplies from agriculturists, who even though they are at a considerable distance from the factory, have introduced new types of cane entirely on the results obtained by the factory and have gone so far as to follow the factory in the time of cutting and so on. We were impressed with the effect of the factory in the vicinity and it struck us that possibly if some sort of inducement were offered to the factories to extend their enterprises, it might be a good thing and if they failed to do their duty, some provision might be made under which Government might either enforce this or else impose a cess.

Mr. Walchand.—You will make it a condition that they shall spend the money under the supervision of Government?

Dr. Matthai.—We are simply throwing out an idea.

Mr. Walchand.—It will have to be made clear that this difference—whatever it is—will have to be spent on research or allied subjects under the supervision of Government.

President.—For instance, the Director of Agriculture may be empowered to audit their books and make a report to the Imperial Council of Agricultural Research, and if they find it necessary to enforce on all factories, measures will be taken. Something on these lines would, we thought, be worth considering.

Mr. Walchand.—I have already pointed out the big difference between Java and India.

Dr. Matthai.—That is a circumstance which has to be taken into account. We realise that the bulk of the sugarcane grown here is for the purpose of making *gur*.

Mr. Walchand.—Yes.

President.—Really your point is that you don't object to the intensive development of the areas in the vicinity of the factory provided adequate

arrangements are made by the Agricultural Department not to exclude the interests of those who may be making *gur*.

Mr. Walchand.—That is my point.

President.—You don't object to this scheme so long as the interests of the *gur* makers are not lost sight of.

Mr. Walchand.—That is right.

MESSRS. T. V. GANPULE AND G. B. KULKARNI.

**Oral Evidence of Messrs. T. V. GANPULE, and G. B. KULKARNI of
Kopergaon (Godavari Canals), G. G. SHEMBEKAR of Baramati
(Neera Canal) and K. T. SHAH and G. D. PATEL of
Pravara, recorded at Poona on Tuesday,
the 9th September, 1930.**

President.—Gentlemen, I understand from your representation that the present position, as you put it before us, is that the price of *gur* in recent years has fallen to about Rs. 7 per Bengal maund and that this price, with the present costs of cultivation, leaves very little margin to the cultivators. Thus you attribute largely to the competition of Java sugar?

Mr. Shah.—Yes.

President.—The price of *gur* depends upon the price of sugar?

Mr. Shah.—Yes.

President.—Because when we were in Southern India we were told that the price of *gur* depends largely on the character of the season, the area under cultivation and so on.

Mr. Shah.—When the price of sugar falls down some people make artificial quality. That affects the price of *gur*.

President.—Am I right in supposing that what you really want to be protected against is first of all the importation of so-called Java *gur*—it is not exactly *gur*, but it is something very close to *gur*—and secondly the possibility of the substitution of synthetic *gur* made from the imported sugar?

Mr. Shah.—People make *gur* out of this sugar combined with some of the inferior type of *gur*. So if the difference between *gur* and sugar is less, the price of *gur* goes down.

President.—You suffered from competition to a considerable extent on the Bombay side?

Mr. Shah.—In Bombay and Ahmedabad regular factories are started to make *gur* out of sugar combined with the inferior type of *gur*. From the United Provinces they get inferior type of *gur* in gunny bags and mix it with sugar.

President.—Is it done on a considerable scale?

Mr. Shah.—Yes, on a considerable scale.

Dr. Matthai.—Has this *gur* a good appearance?

Mr. Shah.—Yes, but people pay a less price because there is a difference in quality. It is generally believed that the artificial *gur* is inferior in quality.

Dr. Matthai.—By how much is the price of artificial *gur* lower than your sugar?

Mr. Shah.—Nearly Rs. 2 or Rs. 3 per palla.

Dr. Matthai.—That would be about a rupee a maund?

Mr. Shah.—Yes.

Dr. Matthai.—The present price of real *gur* is about Rs. 21?

Mr. Shah.—Yes, Rs. 21 to Rs. 22.

Dr. Matthai.—That is about Rs. 7 a maund?

Mr. Shah.—Yes.

Dr. Matthai.—Taking your cost of cultivation and the cost of crushing and making *gur*, does that leave you any margin?

Mr. Shah.—It may leave a negligible margin to some people, but to most of the people it brings an actual loss, because most of the cultivators' cost per palla of *gur* is nearly Rs. 22 or Rs. 23.

Dr. Matthai.—There is a statement of costs that you have given here in your representation.

Mr. Shah.—Yes. The total expenditure comes to about Rs. 830

Dr. Matthai.—That is for the *gur* that you produce per acre of cane?

Mr. Shah.—Yes, 30 tons of sugarcane equivalent to 40 pallas of *gur* comes to Rs. 21 per palla.

Dr. Matthai.—This cost that you give includes interest and depreciation?

Mr. Shah.—It does.

Dr. Matthai.—And supervision?

Mr. Shah.—Yes.

Dr. Matthai.—It covers everything practically, except your profit?

Mr. Shah.—Yes, but one thing should be borne in mind. In spite of spending this, they don't realise 40 tons, because the money-lenders don't give them money at the right time. By not doing the thing in the right time, they might even get 30 tons.

Dr. Matthai.—That is to say your suggestion is that 40 tons of *gur* per acre is a normal figure, but very often the actual yield per acre may be considerably below 40 tons of cane per acre.

Mr. Shah.—I have taken this 40 tons for people who get the money in right time.

Dr. Matthai.—40 tons of cane per acre is how much *gur*?

Mr. Shah.—40 pallas of *gur* or 125 maunds.

Dr. Matthai.—That is about 4½ tons of *gur* per acre?

Mr. Shah.—Yes.

Dr. Matthai.—If you take the last three years, 1927, 1928 and 1929, have the prices of *gur* been steadily going down like the price of imported sugar?

Mr. Kulkarni.—In 1928-29 there was a frost and that affected the crop.

Dr. Matthai.—Therefore there was a reduction of yield and a consequent rise in price?

Mr. Kulkarni.—Yes.

Dr. Matthai.—I am glad you mentioned that. In all the statements of the price of *gur* we have seen there is a rise in the price of *gur* about 1928 and that was due to the lower yield owing to frost.

President.—What was the price last year?

Mr. Shah.—Rs. 22—Rs. 23

President.—How did it compare with the frost year?

Mr. Shah.—During the frost year it was nearly Rs. 28.

President.—And the year before frost?

Mr. Shah.—It was nearly Rs. 23—Rs. 24.

President.—So that it has now fallen to approximately the same figure as before the frost?

Mr. Shah.—Yes.

President.—In the meantime the price of sugar has fallen considerably?

Mr. Shah.—Yes.

President.—So that the fall in the price of sugar has not been entirely reflected in the price of *gur*.

Mr. Shah.—If the difference between *gur* and sugar is very large, then it materially affects, because those people at once begin to make artificial *gur*. If the difference is small, then it doesn't make much difference.

President.—What it comes to is this that the price of imported sugar affects the price of *gur* when there is a very big difference?

Mr. Shah.—Yes, a difference just to induce them to make the artificial *gur*.

Mr. Kulkarni.—When we say Rs. 26, we mean the average of the whole year.

President.—I quite realise that in some seasons it is expensive and in some seasons it isn't.

Mr. Kulkarni.—Most of the cultivators have to sell their jaggery at the time of the season. Therefore if you compare the prices not with the whole year, but with the season, you will find it is still less.

President.—What about the competition of Java *gur*? We made enquires from the Collector of Customs, Madras and the Collector of Customs, Bombay and we find that there was actually an import into Bombay of 700 tons of Java *gur* and there was also some small quantity into Madras. It was landed in Madras at about Rs. 32 a candy of 500 lbs. That is 6 maunds at Rs. 5-8-0 a maund.

Mr. Shah.—Yes. It was a fortunate affair that it didn't come in large quantities

President.—Did it go upcountry?

Mr. Shah.—We heard that it went, but we didn't know whether it was 700 tons or less. It was believed that this *gur* had not the keeping quality.

President.—I can assure you that it keeps extraordinarily well. The colour is very dark.

Dr. Matthai.—The real thing against it is partly its appearance and partly its flavour

Mr. Shah.—Flavour is not appreciated.

Dr. Matthai.—In lasting quality it may prove superior to your *gur*.

Mr. Shah.—That may be.

Mr. Kulkarni.—When there was an import of 700 tons there was a fall in the price which affected the market.

President.—Not so much the result of competition as the effect of rumour?

Mr. Shah.—If the rumour spreads, it actually affects the merchants and the price naturally falls down.

Dr. Matthai.—By how much did it fall?

Mr. Shah.—It came to as low as Rs. 19 per palla.

Dr. Matthai.—When exactly was this?

Mr. Shah.—Last November.

Dr. Matthai.—How long did the price remain at that level?

Mr. Kulkarni.—For one month it continued at that level, because there was no purchaser on account of the rumours that outside *gur* is coming here. Our merchants didn't store the local *gur* and hence the price was reduced.

Dr. Matthai.—Actually I suppose when this imported *gur* found its way into the market, people saw it was in appearance a rather unsatisfactory product?

Mr. Kulkarni.—What I heard from them is this: there were two kinds of *gur*; one was good and can be compared with the Deccan *gur* and the other was very inferior, not fit for consumption.

Dr. Matthai.—Was the superior *gur* imported as such?

Mr. Kulkarni.—Yes.

Dr. Matthai.—Or was it simply *gur* made here out of inferior sugar?

Mr. Kulkarni.—It was imported and it was sold at Rs. 18 or Rs. 19 That was the information I had.

President.—As regards the imported *gur*, your suggestion is that an extra duty of Rs 1-8-0 should be levied?

Mr. Shah.—Yes.

President.—That is to say 25 per cent. *ad valorem* duty plus Rs. 3.

Mr. Shah.—Yes, it would come to 25 per cent. We want a duty sufficient to protect the local *gur*.

President.—Seeing the importance of the *gur* industry in India, do you think that the duty would be sufficient? From your representation I gather that you attach very great importance to a continuance in Bombay of the area under sugarcane and the extension of it if possible. Do you think that a duty of Rs. 1-8-0 would be sufficient for your purposes?

Mr. Shah.—Rs. 1-8-0 per cwt.?

President.—Yes.

Mr. Shah.—It will come to Rs 3-5-0 per palla.

Mr. Kulkarni.—It will come to Rs. 3-5-0 per palla and I think that would be a substantial figure for the present.

Dr. Matthai.—Let me see on what kind of evidence you have come to the conclusion that Rs. 3-5-0 a palla would be sufficient.

Mr. Kulkarni.—Looking to the present market price, we think they can sell at Rs 19-8-0 with profit.

Dr. Matthai.—You are taking the price at which they sold last year?

Mr. Kulkarni.—Yes.

Dr. Matthai.—This imported *gur* was sold at Rs. 19-8-0?

Mr. Kulkarni.—Yes.

Mr. Ganpule.—We have included the recent increase in the duty also in that.

Dr. Matthai.—You mean Rs. 1-8-0 has been included?

Mr. Ganpule.—Yes Rs 19-8-0 includes Rs 1-8-0.

Dr. Matthai.—Rs 19-8-0 was the price last year, and you think that would be the price including the duty?

Mr. Ganpule.—Our information is that it can be sold at Rs. 19-8-0 if it is imported to-day.

Dr. Matthai.—If it was sold at this price last year at the old duty, is there any sort of guarantee that that is the lowest price at which they can import here?

Mr. Kulkarni.—Of course not.

Dr. Matthai.—Take the analogy of sugar. In spite of the fact that an extra duty has been put on it, the price has not gone higher.

Mr. Ganpule.—If there is a further fall in the price, protection ought to be increased.

Mr. Shah.—The present condition of the cultivators in the Deccan area is such that any shock that they would receive would do a heavy damage to the *gur* industry. Supposing even in spite of our imposing a heavy duty they bring down the price to Rs. 16 or so and maintain that level for two years, this industry will be undone. Those people can well afford to suffer a loss for a year or two and therefore they can and may sell at Rs. 16 in spite of the heavy duty. If that happens, then the cultivation here of sugarcane will be done with absolutely

Dr. Matthai.—One suggestion that I should like to make is this. This *gur* that they export to India from Java is one of their most inferior products

Mr. Shah.—May be.

Dr. Matthai.—Most of the sugar that they export to India is 23 Dutch Standard and above. It is a good white sugar.

Mr. Shah.—Yes.

Dr. Matthai.—What corresponds to *gur* is the kind of inferior sugar that they export here. what comes into competition with our *gur* is one of their very inferior products.

Mr. Shah.—Yes.

Dr. Matthai.—Of which apparently they make only a small quantity compared with the amount of sugar that they make. Practically all the cane that they grow—at any rate the great bulk of it—is used in the manufacture of white sugar.

Mr. Shah.—That is right.

Dr. Matthai.—Only a small quantity is made into this inferior kind of sugar. Assuming that this happened, that they try to sell their sugar at a price which gives them their works cost and their overhead charges on the whole business and this inferior article is a bye-product, then they would be prepared to sell it at whatever price the article may fetch. Generally in an industry where there is a main product as well as a bye-product, on the main product they try to get practically all their costs and their overheads and the bye-product is put on the market at whatever price it can fetch. Supposing that is the principle on which they are going to sell this class of sugar which corresponds to your *gur*, then there is no limit that you can fix because “they cannot sell it at Rs. 18 here they will say “we will sell it at Rs. 15”.

Mr. Shah.—That is a point no doubt for consideration. If that happens, and if you apprehend that it is likely to come—because you say it is a bye-product and it might come—in very large quantities, it might do very heavy damage.

Mr. Kulkarni.—We have not considered the question in the light in which you have put it now, that is to say *gur* being their bye-product which they may sell at any price which it will fetch.

Dr. Matthai.—Against that there is another consideration. Last year when this consignment arrived in the market, it was generally felt that the *gur* made in Bombay was very much better. Therefore it is not likely that if another consignment arrived this year, there would be the same nervousness among *gur* producers because they are certain that their *gur* is very much superior and they can depend on the market preferring their *gur* to the imported *gur*.

Mr. Kulkarni.—I think that there is now always the danger or the likelihood of the import of foreign *gur* from Java and other countries. The Indian cultivator is alive to this fact.

President.—Let me put another aspect of the case. So far as the present position is concerned, although in Bombay and possibly in certain other parts of the country the imported Java *gur* might at any rate for a time affect your price, taking India as a whole I suppose you will agree in the main the price of *gur* is fixed by internal competition.

Mr. Kulkarni.—It is.

President.—So that from that point of view whatever duty may be imposed, it will not seriously affect the consumer of *gur*. What I mean is this. At present the price of *gur* is determined by competition between the various producers of *gur* in India. Although there has been an attempt by Java to introduce *gur* so far at any rate it has only affected, shall we say, the fringe of India—that is to say the ports and the areas near the ports. It has not affected the great bulk of the consumers of *gur* in India. Supposing we were to put on a prohibitive duty of say Rs. 6-8-0 or Rs. 8-8-0, it would not follow necessarily that the price of *gur* in India would rise to such an extent as to constitute a serious burden on the consumer?

Mr. Shah.—That is true.

President.—That being so in your opinion is it worth while discriminating between the duty on *gur* and the duty on fine white sugar? Would it not be better to put the same duty on both?

Mr. Shah.—You should put a very heavy duty just to make it impossible for any to come in at all.

President.—My point is this. Supposing the duty on fine white sugar is Rs. 6-8-0 and you raise that to Rs. 7-8-0 is it worth while discriminating between white sugar and *gur*? Why not put the same duty on both?

Mr. Shah.—It would be better to do so.

President.—How does that point of view commend itself to you? What is your opinion?

Mr. Shah.—It is better to increase the duty so as to prevent import.

President.—You are not tied down to any differentiation in the duty as between white sugar and *gur*. I take it that you would not object to the duty being made the same?

Mr. Shah.—It will depend upon the condition of the industry in the country. If it is likely to destroy the local industry completely by introducing *gur* on a larger scale, then the duty should be increased.

Mr. Kulkarni.—There is some inter-relation between the price of *gur* and the price of sugar. If they find that the price of *gur* goes up by reason of the heavier duty and the price of sugar is less, they may try to send more sugar.

President.—My suggestion was not that there should be a heavier duty on *gur*. What I want to know is whether you are of opinion that the duty on all kinds of sugar including *gur* should be the same?

Mr. Kulkarni.—I think that the duty should be the same.

Dr. Matthai.—At present the price of *gur* is Rs. 21, is it not?

Mr. Shah.—Yes.

Dr. Matthai.—Supposing it was decided to impose an additional duty of say Rs. 4 per palla on imported *gur*, by how much do you think would be price of *gur* go up? Assuming that the total quantity of *gur* produced in the Bombay Presidency next year is about the same as this year and then if we have an additional duty of Rs. 4 per palla on imported *gur*, by how much would the price of your *gur* go up?

Mr. Shah.—It will depend upon the amount of *gur* that is likely to be imported with this duty.

Dr. Matthai.—Last year it was a consignment of 700 tons and this year let us say it is going to be 7,000 tons.

Mr. Shah.—It would affect the price of *gur* to a very great extent.

Dr. Matthai.—Do you think that the price would go up to the full extent of the duty? Supposing for example we had this additional duty of Rs. 4 and the producers of *gur* here decided to put up their price from Rs. 21 to 25—is there not the possibility that from the United Provinces and Madras *gur* might be imported into the Bombay Presidency considering the fact that there are very attractive prices prevailing in this part of India?

Mr. Shah.—There is that possibility.

Dr. Matthai.—Then, it would not be possible to push the prices up to the full extent of the duty.

Mr. Shah.—It would not be possible.

Dr. Matthai.—I am trying to illustrate the point which the President made. If you had a high duty like Rs. 4 in the circumstances in which *gur* is made in India—*viz.*, a large number of small producers producing a large quantity all over the country—it is not likely that the price of *gur* will by any means rise to the full extent of any duty that may be imposed?

Mr. Shah.—It will not rise.

President.—The effect will be really to prevent a reduction of the price on account of outside competition?

Mr. Shah.—Yes.

Dr. Matthai.—And also to retain for you the market which would otherwise be captured by them?

Mr. Shah.—Quite.

Dr. Matthai.—There is a point that you have raised in your statement. Is white sugar replacing *gur* in general consumption in this part of Bombay, that is to say, are people who used to consume *gur* using white sugar more than *gur* now? Is the demand being diverted?

Mr. Kulkarni.—There is an increase in the demand for white sugar.

Dr. Matthai.—I can understand that, but it may not be at the expense of *gur*.

Mr. Kulkarni.—I don't think that it is at the expense of *gur*.

Dr. Matthai.—Let me regard myself as a typical inhabitant in this part of Bombay. My family have been using *gur* for generations. Now I find that the price of Java sugar has been steadily coming down from year to year and I say to myself "this sugar looks white, looks clean and I can have it cheaper". Therefore I would rather buy white sugar than *gur*. Are a great many people like me shifting their demand from *gur* to white sugar in that way? Is that happening on a large scale?

Mr. Kulkarni.—That is happening mostly in cities.

Mr. Ganpule.—To a certain extent in the villages too, because sugar is comparatively cheaper than *gur*.

Mr. Shah.—That question has come up in the cities particularly.

President.—The villagers are more conservative and therefore it takes a longer time for them to change their habits.

Mr. Shah.—Yes. Town people change their habits much quicker.

President.—Another reason is that in the cities confectioneries are produced on a large scale?

Mr. Shah.—Yes. In the preparations in which the villagers use *gur*, the town people use white sugar.

President.—Do you think that any increase in the duty on white sugar would really be very much felt by the poorer inhabitants of the towns?

Mr. Kulkarni.—I don't think that the village people would very much care about that because they are consuming only *gur*.

Mr. Shah.—On the contrary they would begin to use *gur* if the price of sugar went up.

President.—Take the millhands for instance.

Mr. Shah.—They would, to a certain extent if the price of sugar went up abnormally.

President.—Do you think that it would be a hardship on them if the price rose from 1 anna 3 pies to 2 annas?

Mr. Shah.—No, because it is not one of the main items of expenditure; it is only a subsidiary item. In the items of expenditure that a millhand has to-day, sugar enters very little.

President.—You are probably in touch with the general opinion on questions of this sort?

Mr. Shah.—Yes.

President.—What would be the general feeling of the consumers? Do you think that they would feel it a hardship?

Mr. Shah.—If the price is merely increased by a rupee or two

President.—Per what?

Mr. Shah.—Per cwt., then they would not feel it much.

President.—Because when it filters down to the retail price, it makes very little difference.

Mr. Shah.—If the price goes up by a pice per lb., they will not feel much.

President.—We were told at Belapur that sugar manufactured in India commands a premium over imported sugar because they prefer swadeshi articles.

Mr. Shah.—That is so.

President.—Would it be any consolation to the consumer if the production of Indian sugar increased and they were to get swadeshi in place of the imported article?

Mr. Kulkarni.—If in the whole of India there is Indian sugar there is no likelihood of there being any feeling against it.

President.—You think that the fact that the output of swadeshi sugar would increase would be considered by the consumer as some compensation for any reasonable increase in price?

Mr. Shah.—Not necessarily; if there is a very wide difference in the price between foreign and swadeshi sentiment will not work for a long time. That sentiment will only work for a short time. What I mean is, if swadeshi sugar is sold in the bazar at 2 annas and the foreign article is sold at 1 anna 6 pies, sentiment will not work with the majority of the people and they will go in for foreign sugar if the price difference is very great and continues over a long period.

President.—My point is somewhat different. If we put on a duty on foreign sugar so as to raise its price, then the price of all sugar will necessarily be approximately the same in the country, but the price of all sugar will also increase to a certain extent on account of the duty. Will this increase in the price of sugar, if it is reasonable, be considered by the consumer as compensated for by the fact that he is able to get swadeshi sugar and meet all his requirements by swadeshi rather than the foreign article?

Mr. Shah.—They would be glad to see that Indian sugar was put into the market. They would certainly like Indian sugar to be encouraged; that is a natural feeling. But if the price of Indian sugar becomes prohibitive as a result of the extra duty, they would feel it a hardship. It may increase the purchasing power of the people because it gives more work to the people. That may be another consolation.

President.—Another direction in which the consumer may gain to some extent and which should be a set off against any increased duty is the fact that at present swadeshi sugar commands a premium over imported sugar. At present about a million tons of sugar is imported every year; if as a result of the protective duty sugar factories increase in the country and instead of producing 100,000 tons Indian factories are able to produce 500,000 or 600,000 tons, it is possible that owing to competition in the country amongst Indian sugar producers this premium which now exists for swadeshi sugar would fall, so that to that extent the consumer will not bear the whole burden.

Mr. Shah.—In that case they wont mind.

Dr. Matthai.—To what extent do you expect to be able to reduce your costs? There are two aspects to it; the first is, to what extent it would be possible for you to increase your yield of cane per acre and at the same time reduce your expenditure on cultivation per acre. That is one aspect and the other aspect is this: The cost that you give here for crushing charges, is that for bullock mill or for a power mill?

Mr. Kulkarni.—This crushing charge of Rs. 140 is for a bullock mill.

Dr. Matthai.—Supposing you used a more up-to-date mill and supposing also on the cultivation side you adopted the results of experiments made here in the Government farm at Manjri, can you say approximately by how much you expect ultimately to reduce your costs?

Mr. Shah.—If we introduced machinery for crushing it may save about 5 annas per palla so far as crushing itself is concerned. By bullock it comes to Rs. 3, by power we have to spend about Rs. 2-10-0.

Dr. Matthai.—Bullock mill cost per palla is Rs. 3-4-0 and power mill Rs. 3-2-0 Is that all the difference?

Mr. Shah.—Depreciation and interest charges will be more in the case of a power mill and haulage will be more.

Dr. Matthai.—Depreciation and interest have already been allowed for, so that your nett saving is 2 annas per palla.

Mr. Shah.—In addition there will be some other things.

Dr. Matthai.—That per maund of sugar is almost negligible?

Mr. Kulkarni.—Yes.

President.—This is on the assumption that a bullock mill turns out 230 lbs. as compared with a power mill's 280 lbs. of juice?

Mr. Kulkarni.—Yes. We have taken the average of these. In a power mill they recover more juice because it does not require any exertion on their part.

President.—Have you allowed in this cost for the fact that with a power mill you would recover more juice from the cane than you would with a bullock mill?

Mr. Kulkarni.—From our experience we have found that the difference in the extraction percentage is only 2 to 3 per cent.

President.—That has been allowed for in these costs?

Mr. Ganpule.—No.

President.—So there will be a further reduction.

Mr. Ganpule.—The difference will be very small.

Dr. Matthai.—What precisely is the kind of power mill that you have used for the purposes of your costs here?

Mr. Shah.—The common one is No. 92, 18 to 20 b.h.p.

Dr. Matthai.—Is it Kirloskar?

Mr. Shah.—American Mill Chatanooaga (No. 92).

Dr. Matthai.—This is one of the best mills that can be used?

Mr. Shah.—Yes.

Dr. Matthai.—If that is so then if you want ultimately to reduce the cost of *sugar* substantially you have got to look for improvements in the variety of cane, that is on the agricultural side of it.

Mr. Shah.—The main factor would be finance.

Dr. Matthai.—That is to say interest on working capital. Is that what you mean?

Mr. Shah.—Yes.

Dr. Matthai.—What do you consider to be the principal items under which any considerable reduction in the cost of sugar may be possible? May I take it that it is fairly clear that as far as the boiling stage is concerned there isn't any substantial reduction possible?

Mr. Shah.—That is so.

Dr. Matthai.—As regards the rest?

Mr. Kulkarni.—One thing is this. If green manure is used wholesale it will reduce the bulky manure to a certain extent. If we put farmyard manure at Rs. 100 that might possibly be reduced by about half by the use of green manure.

Dr. Matthai.—That would reduce the cost by how much?

Mr. Kulkarni.—By about Rs. 30.

Dr. Matthai.—That is to say from Rs. 100 to Rs. 70?

Mr. Kulkarni.—Yes.

Dr. Matthai.—What other costs can you reduce?

Mr. Kulkarni.—As regards the other items I don't think there is any possibility of reducing the cost.

Dr. Matthai.—How many sets do you use?

Mr. Kulkarni.—About 9,000 is our average.

Dr. Matthai.—That is to say on manures you use 100+17+180, or nearly Rs. 300.

Mr. Kulkarni.—Yes. If we reduce that you must also take into consideration the production per acre.

President.—Your point is that if you reduce the quantity of manure your yield per acre is reduced, so that if you want to keep your present yield you consider practically this amount of manure expenditure necessary?

Mr. Kulkarni.—Yes. Supposing we reduced this Rs. 180 figure the yield would be affected. Economically it will not be profitable and we will not be able to get bigger outturn from reduced manure.

Dr. Matthai.—Are you in touch with the experiments made here at Manjri?

Mr. Kulkarni.—Yes.

Dr. Matthai.—Under your conditions in the Godavari isn't there some possibility of reduction?

Mr. Kulkarni.—In Manjri cultivation is going on for so many years.

Dr. Matthai.—How long have you been cultivating this particular spot?

Mr. Kulkarni.—Since the last five years.

President.—Continuous cultivation of a farm increases the fertility of the soil?

Mr. Kulkarni.—Not continuous.

President.—The result on the farm could not be taken as a typical result for the whole district. Your point is, I think, that continuous cultivation of the land accompanied by good manuring increases the fertility of the soil and the yield for a period of years?

Mr. Kulkarni.—We don't know about the farm conditions at Manjri.

Dr. Matthai.—When you say you have cultivated for five years, how many crops have you raised?

Mr. Kulkarni.—About five crops?

President.—On the same land?

Mr. Kulkarni.—No.

President.—How many acres have you?

Mr. Kulkarni.—I have 20 acres under cane. I have reduced it during the last two years. It was previously 30 acres.

President.—Why have you reduced?

Mr. Kulkarni.—For private reasons. There is loss no doubt and I don't want to risk on a large scale cultivation.

Dr. Matthai.—Is there any possibility of reducing the interest on capital by better financial arrangements?

Mr. Kulkarni.—I think this should be financed through the co-operative bank.

Dr. Matthai.—What is the usual rate at which co-operative societies lend money here?

Mr. Kulkarni.—11 per cent.

Dr. Matthai.—So that there is not much reduction possible?

Mr. Kulkarni.—There is no possibility of reduction.

Mr. Ganpule.—Bank advances at the rate of 9 per cent. and the society advances at 11 to 12 per cent.

Dr. Matthai.—I thought it was somewhere about 9½ per cent.

Mr. Ganpule—No. It is 11 to 12 per cent.

Dr. Matthai—When you entered this cost here of Rs. 45 you took interest at 12 per cent. Is that the rate at which you are able to borrow?

Mr. Kulkarni—Yes.

Dr. Matthai—I suppose it depends on the solvency of the borrower?

Mr. Kulkarni—Yes.

President—But the growers of sugarcane as a body are solvent cultivators and therefore perhaps they are able to get money at a lower rate than the growers of jowar for instance?

Dr. Matthai—There is no improvement that you can suggest as regards financing?

Mr. Ganpule—I am afraid not. There might be improvement in other directions but not in the rate of interest. Then there is commission on the selling side and on the purchase of manures, etc. The money-lender charges about 8 annas per palla for manure and for oil cake about 9 annas and the society may charge about 2 annas per palla.

Dr. Matthai—Are there co-operative societies in this part of Bombay for the purchase and sale of manures?

Mr. Ganpule—They purchase through banks and charge 2½ annas per palla.

Dr. Matthai—What difference does that make in the aggregate cost?

Mr. Kulkarni—It won't make any substantial difference but it will help in this way that there will be proper financing at the right time. There will be a saving of about Rs. 20 if the financing is made in proper time.

President—What do you include under supervision charges (item 9)?

Mr. Kulkarni—We generally have in large cultivation a supervisor and also the owner himself supervises. We have taken here the maintenance charges of the owner.

Dr. Matthai—Have you any kind of suggestions to make?

Mr. Shah—It is possible to increase the yield without increasing the cost if increased irrigation facilities are given. If a cultivator gets water at 8 days interval instead of 10 days as is the practice now, he would naturally get instead of 40, 42 tons incurring the same expenditure.

President—Is it possible to give water at 8 days interval?

Mr. Shah—It is possible in those tracts where water is available in large quantity. In Godavari they have surplus water which they don't utilise.

Dr. Matthai—Your point is that if it is done on a basis of 8 days, then it will not mean larger consumption of water?

Mr. Shah—Not proportionately. It may increase by 6 to 7 per cent.

Dr. Matthai—But the increase in yield that you get is proportionately greater?

Mr. Shah—Certainly. In hot weather, in the month of October the water should be given at an interval of 8 days.

Dr. Matthai—Has this point been brought before the Irrigation Authorities?

Mr. Shah—Yes. This year they had made certain changes. They have given concession for this year, but that concession should be continued for all the years to come.

Dr. Matthai—It is being done this year?

Mr. Shah—Yes.

Dr. Matthai—Your suggestion is that it ought to be repeated and made a permanent arrangement?

Mr. Shah—Yes.

Dr. Matthai—Does this apply to you?

Mr. Kulkarni.—Yes. We were only assured, but were not given.

Dr. Matthai.—What is the increase in the yield that you expect on that?

Mr. Shah.—Minimum 2 pallas per acre. That will bring him Rs. 40 per acre. Though the rule is that water should be given at an interval of 10 days, most of the cultivators get it at an interval of 12 or 13 days. This great interval brings them heavy loss. In spite of spending money, by not getting water in right time, they have to suffer very much.

President.—Why don't they give it in the right time?

Mr. Shah.—There may be several reasons. In certain places there is mismanagement. The lower officers are not made responsible. All the rules are so framed that the cultivators are bound down, but the officers are free. If a subordinate officer supplies water to a cultivator at an interval of 14 days, he is never taken to task. If the cultivator takes water at an interval of 9 days, he is fined for it. Most of the rules are so framed that the cultivators are at the mercy of these officers. It is these rules that put them, in spite of the expenses, to a heavy loss.

Dr. Matthai.—Supposing it is so arranged that you get your water exactly at the intervals prescribed, you may get more yield. At present you are getting about 40 pallas in spite of the fact that the intervals are not strictly adhered to.

Mr. Shah.—This 40 pallas is in the case of people who are so favourably placed as to get water at an interval of 10 days regularly. Those cultivators who are at the tail end of the distributory section get their water at an interval of 13 days or 14 days. Instead of 30 tons of cane they get only 20 and such cases are many.

Dr. Matthai.—Your point is if the interval is strictly adhered to, a large number of cultivators could bring their yield up to the normal figure of 40 pallas.

Mr. Shah.—Yes. All the officers must be made responsible for any mistake on their part.

President.—What are these rigid block rules?

Mr. Shah.—In block rules there are several things that hinder our progress. One thing is that the basis of assessment in the block system is wrong. I shall make myself clear by citing one example. A block is considered to be of 3 acres. Out of these 3 acres one acre is allowed for cane and the remaining 2 acres allowed for other crops. For cane they are charging Rs. 45 and for the next two crops they are charging Rs. 21. Now taking the facts and figures for the last 4 or 5 years very few cultivators could utilise this Rs. 21, irrigation charges, because they grow only bajri, jowar which do not pay this heavy cess of Rs. 21. The general procedure is to grow bajri and jowar which might cover Rs. 8. He is charged Rs. 21 taking into consideration that he would grow heavier type of crops, but actually he doesn't. So this becomes an extra burden on cane. Instead of paying Rs. 45 plus Rs. 8 for the remaining 2 acres, he has to spend Rs. 63.

Dr. Matthai.—Is there any other kind of crop which would bear a heavier burden?

Mr. Shah.—Certainly not. There are certain conditions which prevent the growth of any other crop in that block.

President.—Do you cultivate bajri and jowar?

Mr. Shah.—Jowar, Bajri, gram and wheat. These are the 4 crops, which are grown on a large scale.

President.—Are they all irrigated?

Mr. Shah.—In block rules most of them are irrigated. This danger increases in 4th block system. Instead of Rs. 45 they charge Rs. 76.

Mr. Kulkarni.—Would you like to have the grievances? We have tabulated them. The first grievance refers to Godavari and Pravara. They

have made it compulsory that in 1: 4 blocks, one acre of cane should be grown and 3 acres of Bhusar. Up to this time there was 1: 8 block. They have included one additional acre of bhusar.

President.—How long has this been in force?

Mr. Kulkarni.—Since a year or two. It is going to be permanently applied on our canals from 1932 to 1938. We have protested against that giving our own reasons, but we don't know about the results. We can only say this much that it would be uneconomic to the cultivator. We say that there are no profits in bhusar crops. By making it compulsory with cane cultivation, the rent, supervision charges and such things will be extra, hence the cost of cultivation will be increased and there will be more burden on a lesser area of cane.

Dr. Matthai.—What is the total burden on this 4 block scheme? Take 4 acres.

Mr. Kulkarni.—Take 36 acres for example. In 1 to 4 block there should be 9 acres of cane, and in 1: 3 there should be 12 acres. If a cultivator adopts 1: 4 system, he will not have to curtail his overhead charges proportionately, because the area is the same. He will have to rent one acre extra of this bhusar and also pay extra assessment.

Dr. Matthai.—Let us take this 4 block thing. 9 acres are under cane?

Mr. Kulkarni.—Yes.

Dr. Matthai.—How much do you pay on that?

Mr. Kulkarni.—A flat rate of Rs. 19.

Dr. Matthai.—What are the rates charged on the rest of the block?

Mr. Kulkarni.—That is the flat rate.

Dr. Matthai.—Is it your suggestion that practically the whole of it has to be borne by sugarcane?

Mr. Kulkarni.—That extra area will have to be barren. If we take one acre more or taking 36 acres, 3 acres will be less in respect of cane, but the establishment will be the same.

Dr. Matthai.—You are comparing 3 and 4.

Mr. Kulkarni.—Yes.

Dr. Matthai.—Leave 3 out of account for the time being. I want to know exactly how your financial position is affected by this system. Let us take the three block system, which covers 36 acres. What I want you to tell me is how much of the water cess on these 36 acres has to be borne by the sugarcane crop and how much you can pass on to the other crops which are likely to be grown.

Mr. Shah.—Taking on one acre basis?

Dr. Matthai.—Yes.

Mr. Shah.—The bhusar rates are prohibitive.

Mr. Kulkarni.—If we take one acre, water cess will be Rs 10 extra. In one case we have got to engage 3 acres of land and in another case we have to engage 4 acres of land.

Dr. Matthai.—Take only 3 acres.

Mr. Shah.—Instead of Rs. 65, we will have to pay Rs. 57. The cultivators do not go in for any other crop excepting sugarcane.

Dr. Matthai.—Why not?

Mr. Shah.—Because it doesn't pay them. In concentrated circle they don't get manure and if they don't get manure, no other crop excepting sugarcane pays them. Without giving this manure they don't realise any appreciable outturn in any other bhusar crops, so they are quite unwilling to go in for any other crops. If they were given freedom for doing nothing except sugarcane, they would be very glad.

Dr. Matthai.—I understand the main point of your objection is this. Since you are unable to make use of the two other acres in this three block

system and you have to depend entirely on sugarcane, the water cess which is assessed upon two other acres according to those crops falls entirely upon sugarcane.

Mr. Shah.—Certainly.

Dr. Matthai.—Under the conditions you consider that the ryot is not able to grow any other crop which the Irrigation Department wants them to do?

Mr. Shah.—Yes. I suggest he should be given freedom. Out of 3 acres he may grow one acre of sugarcane. If he does not grow any other crop in the remaining two acres he should not be charged. Our point is that instead of charging Rs. 66, he may be charged Rs. 45 for the sugarcane and if he grows any other crops in the remaining two acres, he should be charged for that and not Rs. 21.

President.—Under the present system it becomes paying to keep the land fallow?

Mr. Shah.—Yes. That is the system in Guzerat. He leaves the land fallow and he doesn't grow anything. This should be left to the freedom of the cultivator, while here the department has compelled them to pay the assessment even if he doesn't want to grow the crop.

President.—They must have some reason.

Mr. Shah.—That reason has not been appreciated by the cultivator.

President.—It has got to do with the gradual exhaustion of the land.

Mr. Shah.—He may be asked to change the place. Out of 3 acres if he has cane in No. 1, he may be compelled to grow cane in No. 2. We do appreciate the selection of the plot under the block system, but he should not be charged on the other two blocks which remain fallow.

President.—What is the next grievance?

Mr. Kulkarni.—As he says bhusar charges are more. We quite agree with him. This is aggravated in 1 : 4 block system.

Dr. Matthai.—Logically it must be so.

Mr. Shah.—I want to draw your attention to one more point. By compelling all the people to go in for 1 : 4 block system, there is going to be a great change in the price of *gur*. What I mean is this: in 1 : 3 block system people generally go in for January and February plantation. In 1 : 4 block system people begin planting their canes in the month of June.

Dr. Matthai.—Is 1 : 4 system absolutely necessary?

Mr. Shah.—It necessarily induces the men to go in for *Adsali*.

Dr. Matthai.—Why?

Mr. Shah.—There is facility for overlapping. He is allowed to overlap his cane by 8 months. That is an inducement and it so happens that he would generally go in for June planting instead of February planting. The result is that in 1 : 3 block system *gur* comes in February and March and in 1 : 4 block system *gur* comes in the month of October. By both the systems remaining in existence, *gur* comes in at two different times. If there is only one season, the market will be flooded and the price of *gur* will go down.

Dr. Matthai.—Are you arguing for the retention of both the systems?

Mr. Shah.—Yes. Now they have stated that one system should be in force. Our desire is that both systems should be in force the option being left to the cultivator, because the conditions are quite different in both the systems. There should not be any compulsion for any one particular system.

President.—At the same time the cultivator, if he leaves the land fallow, should not be charged the irrigation rate?

Mr. Shah.—If he leaves it fallow, he should not be charged.

President.—What you want to do is to go back to the old system by which a certain rate is charged for sugarcane and a certain rate if he lets the land lie fallow.

Mr. Shah.—Yes. But we object to the cultivators being compelled to grow other crops. That is one. Secondly, both the systems should remain in force to allow the free distribution of *gur*.

Dr. Matthai.—You object more to the 1 : 4 system than to 1 : 3 because the burden in the former case is more.

Mr. Shah.—Yes.

Dr. Matthai.—Supposing the Irrigation Department told you “we are going to give up 1 : 4”, would you prefer that to a combination of 1 : 3 and 1 : 4?

Mr. Shah.—On condition that they allow certain overlapping. In the 1 : 3 system no overlapping is allowed.

Dr. Matthai.—You want 1 : 3 system and at the same time facilities for overlapping?

Mr. Shah.—Yes

Dr. Matthai.—Would the Adsali crop be sufficient to affect the crop?

Mr. Shah.—The area will increase. When the cultivators find that there is a remunerative price available for *gur*, they will go in for it.

Dr. Matthai.—Adsali crop is more expensive?

Mr. Shah.—Yes, but if it pays a little more, the cultivator will go in for it.

President.—I understand that the block system, if all your demands are conceded, would amount to this. Not more than one-third of the tenant's irrigable area should be under sugarcane, in 1 : 3 system.

Mr. Shah.—Yes.

President.—In the 1 : 4 system, not more than one-fourth of the tenants irrigable area should be under sugarcane.

Mr. Shah.—Yes

President.—But the tenant should be given the option of growing Adsali or any other just as he likes.

Mr. Shah.—Yes.

Mr. Kulkarni.—This 1 : 4 system came into existence on account of Adsali.

President.—It was really designed for the Adsali crop?

Mr. Kulkarni.—Yes. It came into existence mainly at the request of Adsali growers. In pre-war days there was a great difference in price between October and January.

President.—Is there any other point?

Mr. Shah.—We want to tell you about certain rules. That is also one of the grievances against the block rules. At present, as Special Irrigation and the Proper Irrigation Departments are under two different heads, the cultivator loses much time in getting his pass sanctioned.

President.—He has to get a pass for what?

Mr. Shah.—For growing sugarcane. If he is to plant the cane in the month of February, he has to get his pass in the month of January.

President.—What is exactly a pass? Is it a permit to take water?

Mr. Shah.—Yes. He has to get the permission from the Irrigation Department to plant cane in the month of January if he is to begin his operations in the month of February. He has to fill in a form and send it to the Special Irrigation clerk. After it has been approved by the head of that Department, it goes to the proper Irrigation Department. There again, the head of that department has to approve of it. Sometimes there occurs such considerable delay in getting the pass sanctioned that the culti-

vator is forced to begin his operations in the month of March instead of in February.

President.—On account of the fact that he has to get the permission of the heads of the Special Irrigation and the Proper Irrigation Departments?

Mr. Shah.—Yes. Every cultivator has to get a pass.

President.—Surely there must be some authority closer to the cultivator?

Mr. Kulkarni.—There must be only one Department and not two.

Mr. Shah.—Actually there was great chaos. People did not get their passes and several other things sanctioned in time.

President.—Is it not possible to get some sort of pass from the district authority or the local authority?

Mr. Shah.—It is possible and we want that changes should be effected in that direction.

President.—What you are really urging is some decentralisation of authority?

Mr. Shah.—What I would suggest is that the various executive engineers should have both the powers of the Special Irrigation and of the Proper Irrigation. The executive engineer of the district should be authorised to sanction the passes instead of having to go to the Superintending Engineer in charge of Special Irrigation and the Superintending Engineer in charge of Proper Irrigation.

President.—You have to get a license? You cannot plant your cane until you get the permission?

Mr. Shah.—That is so. To get a pass it takes a long time and the delay that invariably occurs comes in the way of his operations.

Dr. Matthai.—The normal operation of sugarcane crop lasts 15 months and this departmental circuit makes it 17 months?

Mr. Shah.—Yes.

President.—Is there any other point? I see you suggest a cane breeding station for the Deccan Canal area.

Mr. Shah.—Yes.

President.—As you know there is a breeding station at Coimbatore. So far the researches at Coimbatore have been directed to producing a cane which will suit the conditions in the United Provinces and Bihar and Orissa. Such a cane is probably not particularly suitable for the Deccan area. But now quite recently money has been sanctioned to conduct research into thicker canes—tropical canes—which would probably be suitable for the Deccan area. So your contention is that it would be advantageous to have a breeding station here where the canes which have proved to be successful under Coimbatore conditions can be still further tried under the Deccan conditions on the spot?

Mr. Shah.—Yes.

Mr. Main.—A scheme was sanctioned by the Bombay Government but money was not available. The Imperial Council of Agricultural Research is favourable to some such establishment and even prepared to contribute to it.

President.—Have you any other grievance?

Mr. Shah.—A lot of grievances.

President.—The Department of Agriculture, you suggest, should manage agriculture and the Irrigation Department should manage irrigation. I understand that there is some overlapping of authority. That is your point, is it not?

Mr. Shah.—What is suggested is that the agricultural graduates may be in power in certain respects because they will be able to understand the cultivators' conditions better than the Engineering Department.

President.—There is some overlapping at present?

Mr. Shah. Not overlapping exactly. The period of supplying water, rotation time for the sowing of particular crops—these things can be understood by the agricultural graduates better than the engineering graduates. So I suggest that the people of the Agricultural Department should be in proper management.

Dr. Matthal. Agricultural graduates also take a course in agricultural engineering?

Mr. Shah. Yes.

Mr. Mann. We have a Professor of Engineering at the Agricultural College. Engineering is also a part of normal routine.

President. Your point is that all these questions connected with agriculture should be decided by the Agricultural officers and the canal authorities should be told to supply the water in such quantities and at such times as might be specified, should this be possible? That is the only qualification?

Mr. Shah. What we suggest is that things may be so arranged as to ensure a smooth working. Do you mean that there will be confusion if there is to be only one Department instead of two Departments?

President. If the Agricultural Department issued instructions to the Canal authorities to supply water at certain times and for certain crops at certain quantities, it is just possible that these instructions might be such that the Canal authorities in all places might not be able to supply owing to shortage of water or some such cause?

Mr. Shah. They will have to find some way out of it.

Mr. Kulkarni. Supposing there is a case of hardship, it is not the engineering man that should decide that we should take so much water. It is the agricultural authority that should have a deciding voice.

President. Your point is that the Agricultural Department should say "My agriculturist should have water at such and such times and if there is water, it must be supplied".

Mr. Shah. Yes.

Mr. Kulkarni. The thing is this. If the Department of Agriculture says that the outturn is likely to be more with a greater supply of water, it is not acted upon, but if it says that a certain crop requires less water, it is readily accepted.

Dr. Matthal. What is this reference to the Factory Act at the bottom of page 3 of your letter of 9th September?

Mr. Kulkarni. Our crushing period is two to three months. At that time we have to hire people. In the case of Chatanooga power mill (92) there will be one man in the engine room, and there are others. They take all these people together and say that they come under the Factory Act. What we say is that they are working in different directions and they should not be considered as coming under the jurisdiction of the Factory Act.

President.—What is the disadvantage of the application of the Factory Act?

Mr. Kulkarni.—It is a temporary thing.

President.—Where do you suffer by the application of the Factory Act? In what way does it affect you?

Mr. Kulkarni.—It is inconvenient.

Dr. Matthal.—Does it mean interference?

Mr. Kulkarni.—Yes.

Mr. Ganpule.—At present we are working 13 or 14 hours. But they say that it should not be more than 12 hours. Our contention is that the process requires 13 or 14 hours continuous working.

Dr. Matthal.—And they may have rest after the season is over?

Mr. Ganpule.—During the season itself.

Dr. Matthai.—Your point is that the conditions of the *gur* industry are such that it is necessary that the *gur* should be produced as rapidly as possible and therefore you have sometimes to get people to work 13 or 14 hours?

Mr. Kulkarni.—It is a contract work.

Mr. Ganpule.—The process is an intermittent process and not a continuous one.

Dr. Matthai.—What do you mean by 'intermittent'?

Mr. Ganpule.—He has not got to work continuously. He works for some time and then takes rest.

Dr. Matthai.—In that case does the Factory Act stand in the way?

Mr. Kulkarni.—It is not a regular interval, but all the same he has not got to work continuously. Though he has to be present, he is not actually working.

President.—How would you differentiate between a *gur* factory and other factories? My point is this. If you wish to be exempted from the Factory Act, how is that to be done? My recollection is that there is some provision under which exceptions are permissible under the Factory Act but they would have to be defined very carefully, so that the factories in towns should not take advantage of any exemptions given to factories in villages. How would you differentiate? Would you simply specify them?

Mr. Shah.—A factory working with a 50 horse power engine should not come under the Factory Act for cultivators purposes.

President.—If an exception was made with engines utilised for agricultural purposes, would that be sufficient?

Mr. Shah.—Yes. There is one other point. The Royal Commission had recommended Advisory Committees and we desire that the Advisory Committee should be composed of men representing the Irrigation Department, the Agricultural Department and the cultivators. In framing rules. . . .

Dr. Matthai.—You mean the Irrigation rules?

Mr. Shah.—Yes, in the matter of these new rules which have been framed and brought into force, the cultivators have never been consulted.

Dr. Matthai.—Is there an advisory committee?

Mr. Shah.—No. The cultivators at present have no voice.

President.—In what position does your Collector stand?

Mr. Shah.—There is no advisory committee.

Dr. Matthai.—This is a proposal of the Royal Commission on Agriculture?

Mr. Shah.—Yes.

Dr. Matthai.—For what area?

Mr. Shah.—For the Deccan area.

Dr. Matthai.—For the whole of the Deccan area, one single advisory committee?

Mr. Shah.—Yes. To that committee two people from each circle should be selected to represent cultivators. At the time of framing rules, they may be consulted. Now what happens is that all these rules have been framed without consulting them. So several rules are harmful to the cultivators.

President.—Is there any suggestion that the Collector should sit on this advisory committee?

Mr. Shah.—No, because the cultivators do not know before the rules are framed so that they do not get a chance of making a complaint.

President.—Would it not be better for your advisory committee to be constituted of the Agricultural Department, the Irrigation Department, the Collector and two agriculturists from each canal? The Collector is supposed to be in touch with the cultivators.

Mr. Kulkarni.—There should be a majority of non-official members. I think it has been stated in the Agricultural Commission's report that there should be a non-official majority, from agriculturists if possible.

Mr. Shukle.—It so happens that very great harm is done to the agriculturists because rules framed to-day are executed to-morrow with the result that their schemes are upset resulting in heavy losses which have to be borne by the cultivators.

President.—Your point is that the advisory committee should contain a sufficient number of cultivators?

Mr. Kulkarni.—Yes; to represent their case. I will give you an instance of the whim of the Irrigation Department. They notified in the month of March that for the hot weather seasonal crop no water would be given and at once they stopped water. Every time we have to go up to the higher authorities and put forward our grievances and each time they gave their consent but it came at such a time that the concession given was of no use to us.

President.—Are there any other grievances?

Mr. Kulkarni.—Here is a list of grievances (handed in). We say restriction of preseasonal waterings to 4th area in 1. 4 blocks should be done away with.

President.—That we have disposed of already.

Mr. Kulkarni.—Then we say preseasonal watering should be allowed into 1 : 3 block. Then, overlapping should not be treated as a concession and it should be allowed to perennial crops other than cane, planted in lieu of cane. Irrigation month begins from 15th of every month and overlapping is given on a monthly basis which is rather inconvenient. Overlapping on a fortnightly basis will facilitate matters. Block application could be called for by the 15th February of any year that is four months before June cultivation.

President.—What is block application?

Mr. Kulkarni.—That is the first application that we are going to take so much area over a period of so many years under cane. That is the first application. What now happens is that we have to submit the application a year before to plant an area in the case of June plantation.

Dr. Matthai.—That is to say if you are planting in June 30 you have to apply in June 1929?

Mr. Kulkarni.—Yes. We get from February 1930 and for four months we have to suffer.

Mr. Ganpule.—We have to give water rate for four months: actually we plant in June but the block period begins from previous February. We suggest that they should give us on ordinary lease for 8 months and take the remaining portion under block after 8 months.

Mr. Kulkarni.—Then we say "there should be no half acre bunds for bhusar crops". It is a very inconvenient unit to keep bunds for half an acre. We have been representing the matter for the last three or four years and they say they are reducing by 3 inches. The next is that "cultivators should be allowed to plant setts in Porpath or water channel leading to half acre unit plots". We don't think the Irrigation Department will be a loser in any way because the water is there and it is flowing and if the crop is there, what is the harm. The next one is "Water to cane should be given on every 8th day throughout the hot season and in October". And that "Water rates for all crops should be reduced to their former level, and specially in case of Bhusar crops".

President.—The rates have been recently raised?

Mr. Ganpule.—They raised the water rates but for cane it had been brought down to Rs. 45 But for bhusar crop they have not been brought down.

President.—When was this reduction in cane?

Mr. Ganpule.—About three years ago, but for bhusar it still continues.

Mr. Kulkarni.—Our next grievance is "Remission of water rates should be granted for green manure crops as per recommendation of the Royal Commission of Agriculture".

Dr. Mutthai.—Did you represent these things to the Royal Commission on Agriculture?

Mr. Kulkarni.—No.

Dr. Mutthai.—I suppose it really comes to this that in regard to all these matters where the interest of the cultivators and the decision of the Irrigation Department have come into conflict, the only thing we can consider is the introduction of some kind of system under which the interests of the cultivator will be taken into consideration at the time the rules are made.

Mr. Shah.—That will set the whole thing right.

Mr. Ganpule.—What we say is that the decision of the Agricultural Department as regards crop requirements should be binding on the Irrigation Department.

President.—Have your Collectors any power at all in irrigation matters?

Mr. Ganpule.—No.

President.—Supposing in a particular tract it was very urgent that the irrigation rules should be relaxed for the time being owing perhaps to climatic conditions, is it not possible for the Collector to issue urgent orders?

Mr. Shah.—I think it is possible to advise the Irrigation Department

President.—But he can't simply issue an office order?

Mr. Shah.—He cannot. He can only send his recommendation to the Irrigation Department and it is for them to do what they want.

